U.S. Application No. 09/608,713
Attorney Docket No. 09299.0002

VERIFICATION OF TRANSLATION

I, Mikiko Oyanagi

of 6th Fl., Kantetsu Tsukuba-Science-City Bldg. 1-1-1, Oroshi-machi, Tsuchiura, Ibaraki, JAPAN

declare as follows:

1. That I am well acquainted with both the English and Japanese languages, and

2. That the attached document is a true and correct translation made by me to the best of my knowledge and belief of:

(a) Japanese Patent Application No. Hei 11-188630
Entitled: " HCV POLYMERASES SUITABLE FOR CRYSTAL STRUCTURE ANALYSIS AND METHODS FOR USING THE CRYSTAL STRUCTURES"
Filed on July 2, 1999

Sep 4, 2003
(Date)

Mikiko Oyanagi
(Signature of Translator)
Mikiko Oyanagi

[Document Name] Specification

[Title of the Invention] HCV POLYMERASES SUITABLE FOR CRYSTAL STRUCTURE ANALYSIS AND METHODS FOR USING THE CRYSTAL STRUCTURES

[Claims]

[Claim 1] A hepatitis C virus (HCV) polymerase of the following (a) or (b):

(a) an HCV polymerase consisting of the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to the 570th residue required for column purification; or

(b) an HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 wherein one or more amino acids are deleted, substituted, or added, and wherein the HCV polymerase has an RNA-dependent RNA polymerase activity and an amino acid sequence adjacent to the 570th residue required for column purification.

[Claim 2] The HCV polymerase of claim 1, wherein a sulfur atom in methionine (Met) is substituted by a selenium atom.

[Claim 3] A crystal of HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1.

[Claim 4] A crystal of HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein a sulfur atom in methionine (Met) is substituted by a selenium atom.

[Claim 5] A DNA of the following (a) or (b) encoding HCV polymerase:

(a) a DNA which encodes a protein consisting of the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to the 570th residue required for column purification; or

(b) a DNA which encodes a protein having an RNA-dependent RNA polymerase activity and comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein one or more amino acids are deleted, substituted, or added, and an amino acid sequence adjacent to the 570th residue required for column purification.

[Claim 6] A method for determining a structural coordinate of a cocomplex or a variant of HCV polymerase by the molecular replacement method using the structural coordinate of the HCV polymerase of Table 2.

[Claim 7] A method for designing HCV polymerase inhibitors,

which comprises the step of composing a compound having a molecular structure complementary to an HCV polymerase active site and/or an additional inhibitor-binding site from a structure of a test sample using the structural coordinate of the HCV polymerase of Table 2, or a structural coordinate substantially-equivalent thereto, or a part thereof, as well as the structural coordinate of the test sample.

[Claim 8] A method for evaluating an HCV polymerase-inhibiting activity, which comprises the step of comparing complementarity of a test sample to an HCV polymerase active site and/or an additional inhibitor-binding site using the structural coordinate of HCV polymerase of Table 2, or a structural coordinate substantially-equivalent thereto, or a part thereof, as well as the structural coordinate of the test sample.

[Claim 9] A method of screening for an HCV polymerase inhibitor, which comprises the steps of (a) to (c):
(a) selecting a test sample with a complementarity to an HCV polymerase active site and/or an additional inhibitor-binding site using the structural coordinate of the HCV polymerase of Table 2 as well as the structural coordinate of the test sample;
(b) synthesizing the test sample selected in (a); and
(c) contacting the test sample synthesized in (b) with the HCV polymerase under the presence of an RNA as a template and a substrate to determine HCV polymerase-inhibiting activity.

[Claim 10] An HCV polymerase inhibitor selected by the method of claim 9.

[Detailed Description of the Invention]
[0001]
[Technical Field of Industrial Application]

The present invention relates to HCV polymerases suitable for crystal structure analysis, and the use of the crystal structures. More specifically, the present invention relates to HCV polymerases that can be mass-produced by genetic recombination and have a stable crystal structure, as well as (a) a method for analyzing the crystal structure of an HCV polymerase variant, (b) a method for analyzing the crystal structure of a cocomplex in which HCV polymerase binds

to an inhibitor, and (c) a method for evaluating an HCV polymerase-inhibiting activity which comprises the step of determining the complementarity of a test sample to an of HCV polymerase active site and/or an additional inhibitor-binding site.

[0002]

[Prior Art]

Hepatitis C is a grave problem as it is spread by blood transfusion and such, and more than half of the cases become chronic with a high probability of progressing into cirrhosis and hepatoma. A cause of hepatitis C is known to be the hepatitis C virus (HCV), the gene of which was cloned in 1989 by the immunoscreening method using plasma of chimpanzees infected with human plasma (Science, 244, 359-362 (1989)).

[0003]

Hepatitis C virus is a positive-strand RNA virus with an envelope and comprises RNA encoding a protein consisting of 3010 amino acids. A precursor protein biosynthesized from the RNA in a host is processed into a structural protein forming viral particles (a core protein and two envelope proteins) and a non-structural protein (NS2, NS3, NS4A, NS4B, NS5A, NS5B) by a cellular signalase and a protease encoded by the virus itself. It has been thought that NS2 and NS3 retain the protease activity and are necessary enzymes for processing the precursor protein, and the helicase of NS3 and RNA-dependent RNA polymerase of NS5B are essential for viral replication.

[0004]

At present, interferon ? and interferon ? are used for treating HCV, however, these have little or no effect for many patients. Therefore, there is a strong need for a more effective drug. The development of HCV protease-targeting inhibitors is underway, and studies are also being conducted on inhibitors targeting helicase, RNA-dependent RNA polymerase, and such.

[0005]

An inhibitor for viral proliferation is generally screened by measuring the activity of inhibiting viral proliferation *in vitro* or *in vivo*. However, techniques for conducting viral proliferation

of HCV *in vitro* has not been established yet, and thus, the screening of HCV viral inhibitors is difficult.

In developing inhibitors for enzyme activity, molecular designing of inhibitors has been carried out by computers based on the three-dimensional structure of enzymes to enhance screening efficiency. In this method, candidate compounds are selected and screened, and then the inhibiting activity thereof are determined.

In order to design inhibitory molecules by computers, the crystal structure of an enzyme must be revealed. The crystal structure can be clarified by X-ray analysis. For example, the crystal structures of HIV reverse transcriptase (Nature structural biology, 2, 293-302 (1995); Structure, 3, 365-379 (1995)), interleukin-1? transformation enzyme (WO 95/35367), protease of cytomegalovirus (WO 97/42311), HCV helicase (WO 99/09148), and such, have been analyzed.

Crystal structure analysis using X-rays requires a large amount of enzymes that can be stably crystallized. Thanks to the development of the genetic recombinant technique, a large amount of enzymes can be homogeneously and highly purified. However, it is difficult to obtain enzyme crystals suitable for X-ray analysis, and the structure may not remain stable, even if it was stable at the time of crystallization, and only incomplete structures can be analyzed in many cases. For example, the reported crystal structure of poliovirus RNA-dependent RNA polymerase (Structure 5, 1109-1122 (1997)) is not complete, and only some parts have been analyzed, presumably because the crystallized protein has no stable structure.

[0006]

[Problems to Be Solved by the Invention]

An objective of the present invention is to provide HCV polymerases having a stable crystal structure, and DNA encoding the same.

Another objective of the present invention is to analyze the crystal structure of the HCV polymerases, and provide a structural coordinate useful for crystal structure analysis of HCV polymerase variants and such.

Additionally, the present invention provides a method for

evaluating the inhibiting activity of a compound using a computer based on the crystal structure of an HCV polymerase, and a method of screening for HCV polymerase inhibitors using the evaluation method.

[0007]

[Means to Solve the Problems]

The present inventors discovered that proteins having an addition of an amino acid sequence required for purification at the C-terminus of HCV polymerase are stable even after crystallization. After exhaustive studies, the present inventors successfully clarified the crystal structure to complete the present invention.

Specifically, the present invention provides (1) to (16) as described below.

(1) A hepatitis C virus (HCV) polymerase of the following (a) or (b):

(a) an HCV polymerase consisting of the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to the 570th residue required for column purification; or

(b) an HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 wherein one or more amino acids are deleted, substituted, or added, and wherein the HCV polymerase has an RNA-dependent RNA polymerase activity and an amino acid sequence adjacent to the 570th residue required for column purification.

(2) The HCV polymerase of (1), wherein a sulfur atom in methionine (Met) is substituted by a selenium atom.

(3) A crystal of HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1.

(4) A crystal of HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein a sulfur atom in methionine (Met) is substituted by a selenium atom.

(5) A DNA of the following (a) or (b) encoding HCV polymerase:

(a) a DNA which encodes a protein consisting of the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to the 570th residue required for column purification; or

(b) a DNA which encodes a protein having an RNA-dependent RNA polymerase activity and comprising the amino acid sequence from position 1 to

570 of SEQ ID NO: 1, wherein one or more amino acids are deleted, substituted, or added, and an amino acid sequence adjacent to the 570th residue required for column purification.

(6) A method for determining a structural coordinate of a cocomplex or a variant of HCV polymerase by the molecular replacement method using the structural coordinate of the HCV polymerase of Table 2.

(7) A method for designing HCV polymerase inhibitors, which comprises the step of composing a compound having a molecular structure complementary to an HCV polymerase active site and/or an additional inhibitor-binding site from a structure of a test sample using the structural coordinate of the HCV polymerase of Table 2, or a structural coordinate substantially-equivalent thereto, or a part thereof, as well as the structural coordinate of the test sample.

(8) A method for evaluating an HCV polymerase-inhibiting activity, which comprises the step of comparing complementarity of a test sample to an HCV polymerase active site and/or an additional inhibitor-binding site using the structural coordinate of HCV polymerase of Table 2, or a structural coordinate substantially-equivalent thereto, or a part thereof, as well as the structural coordinate of the test sample.

(9) A method of screening for an HCV polymerase inhibitor, which comprises the steps of (a) to (c):

(a) selecting a test sample with a complementarity to an HCV polymerase active site and/or an additional inhibitor-binding site using the structural coordinate of the HCV polymerase of Table 2 as well as the structural coordinate of the test sample;

(b) synthesizing the test sample selected in (a); and

(c) contacting the test sample synthesized in (b) with the HCV polymerase under the presence of an RNA as a template and a substrate to determine HCV polymerase-inhibiting activity.

(10) An HCV polymerase inhibitor selected by the method of (9).

[0008]

The terms used herein have the following meanings:

"Amino acid sequence required for column purification" means

an amino acid sequence such as a histidine tag, which can be added to proteins for facilitating absorption to column resins for column purification of the protein. Such a histidine tag requires six or more histidines, more preferably six histidines.

"An amino acid sequence wherein one or more amino acids are deleted, substituted, or added" means an amino acid sequence comprising 1 to 20, preferably 1 to 10, and more preferably 1 to 5 amino acids which are deleted, substituted, or added.

"Structural coordinate" is a mathematical coordinate obtained by converting patterns obtained by X-ray diffraction by atoms of HCV polymerase in crystal form into a numerical value. It presents locations of atoms expressed as a three-dimensional coordinate. Specifically, the expression means the structural coordinate shown in Table 2 of Example 2.

"A structural coordinate substantially equivalent to that of HCV polymerase" means a derivative structural coordinate generated as a result of artificially processing the structural coordinate of the HCV polymerase, or a part thereof, by using computers or such. The substantially equivalent structural coordinate preferably includes the structural coordinate shown in Table 2 in which the locations of the atoms are varied within the range of residual mean square deviation ? 0.5 Å or less, and more preferably, ? 0.2 Å or less from the original atoms.

"Molecular replacement method" is a method for determining a phase angle of a protein whose structure is unknown, using as an initial model, the structure of a known protein with the same function. Specific procedures are described in Experimental Chemistry Course 10, Diffraction, Japanese Society of Chemistry, 260-263 (1992), or Methods in Enzymology, 115, 55-77 (1985), edited by M. G. Rossman.

"Cocomplex" means a complex formed by HCV polymerase and a compound having HCV polymerase-inhibiting activity. Cocomplexes include those formed by cocrystals, and those formed by soaking HCV polymerase crystals in a solution containing a compound having HCV polymerase-inhibiting activity.

"Active site" means (1) the region of HCV polymerase in which RNA is replicated using HCV template primer RNA, formed by Asp at

positions 220, 318, and 319, Lys 144, and Arg 158 in the amino acid sequence encoding the HCV polymerase, and/or (2) a hydrophilic, shallow hollow formed by Ser 282, Thr 287, and Asn 291.

"Additional inhibitor-binding site" is not an RNA replication site, but a space generated in the HCV polymerase when RNA is replicated using HCV template primer RNA as a template, and formed by the regions of amino acid residues 213 to 223, 310 to 325, and 348 to 366. These regions include those having 1 to 20, preferably 1 to 10, and more preferably 1 to 5 amino acid shifts towards the N- or C-terminal side.

"A part of a structural coordinate" means a structural coordinate including structures of the active site and/or additional inhibitor-binding site.

"Complementarity to an active site and/or an additional inhibitor-binding site" is determined by calculating the state in which a test sample is integrated conformationally or energically into an active site and/or an additional inhibitor-binding site, and converting into a numerical value, the binding stability of the test sample to the active site and/or additional inhibitor-binding site, or visually modeling the binding stability.

[0009]

The present invention is illustrated simply below.

The present invention provides HCV polymerases suitable for crystal structure analysis, and methods for using the crystal structure.

More specifically, the present invention relates to HCV polymerases that can be mass-produced by genetic recombination and have a stable crystal structure, as well as (a) a method for analyzing the crystal structure of an HCV polymerase variant, (b) a method for analyzing the crystal structure of a cocomplex in which HCV polymerase bound to an inhibitor, and (c) a method for evaluating an HCV polymerase-inhibiting activity which comprises the step of determining the complementarity of a test sample to an of HCV polymerase active site and/or an additional inhibitor-binding site.

[0010]

<u>HCV polymerases suitable for crystal structure analysis and genes thereof</u>

The HCV polymerases suitable for crystal structure analysis of the present invention comprise (a) an HCV polymerase consisting of the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to the 570th residue required for column purification; and (b) HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein one or more amino acids are deleted, substituted, or added, which has an RNA-dependent RNA polymerase activity, and an amino acid sequence adjacent to the 570th residue required for column purification.

HCV polymerases of the present invention can be prepared by standard genetic recombinant techniques.

Specifically, a DNA encoding an HCV polymerase, which consists of DNAs encoding an amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to 570th residue required for column purification, is inserted into a vector. The vector is used to transform, for example, *E. coli*, and the resulting transformants are cultured to isolate the HCV polymerase.

In the polymerase as described above, the amino acid sequence of a known HCV polymerase have been replaced by amino acids which are bound to linkers and are required for column purification. Such a sequence makes purification easy and enables stable crystallization.

The crystals of the obtained HCV polymerase recombinant can be grown by vapor diffusion and used for crystal structure analysis. Furthermore, a cocrystal comprising the polymerase and a compound having HCV polymerase-inhibiting activity, or a crystal prepared by soaking the polymerase in a solution of the compound can also be used for crystal analysis of the cocomplex.

[0011]

It is generally known that even if an amino acid sequence of a protein having a certain physiological activity is slightly modified, for example, by deletion, substitution of one or more amino acids in the amino acid sequence, or addition of one or more amino acids to the amino acid sequence, the physiological activity of the protein may be retained. Therefore, an HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein one or more amino acids are deleted, substituted, or added, which has

an RNA-dependent RNA polymerase activity, and an amino acid sequence adjacent to the 570th residue required for column purification is included in the scope of the present invention.

A variant generated by deletion, substitution, or addition of amino acid, can be prepared by, for example, subjecting the gene encoding the amino acids to site-directed mutagenesis known in the art (for example, Nucl. Acid Research, Vol. 10, No. 20, 6487-6500, 1992).

For example, site-directed mutagenesis can be performed by using synthetic oligonucleotide primers complementary to the single-stranded phage DNA to be subjected to a desirable and specific mutagenesis. In addition to site-directed mutagenesis, methods for deleting, substituting, or adding amino acid sequences include methods in which a gene is treated with a mutagen, or methods in which a gene is cleaved with a restriction enzyme, and a selected gene fragment is removed, added, or substituted, and ligated.

A variant may include a conservatively substituted sequence, meaning that a specific amino acid residue may be substituted by a residue with similar physiochemical properties. Unrestricted examples of a conservative substitution include substitution among amino acid residues with an aliphatic chain, such as substitution among Ile, Val, Leu, or Ala, or substitution between Lys and Arg which are basic amino acids having a polar group.

[0012]

The present invention also provides DNA encoding an HCV polymerase suitable for crystal structure analysis.

Specifically, (a) DNA encoding an HCV polymerase consisting of DNAs encoding the amino acid sequence from position 1 to 570 of SEQ ID NO: 1 and an amino acid sequence adjacent to the 570th residue required for column purification, and (b) DNA encoding an HCV polymerase comprising DNA encoding the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein one or more amino acids are deleted, substituted, or added, which has an RNA-dependent RNA polymerase activity, and an amino acid sequence adjacent to the 570th residue required for column purification.

Since an amino acid can be encoded by more than one codon, any DNA having a nucleotide sequence can be included within the scope

of the present invention as long as the encoded amino acid sequence is identical. Therefore, the DNA of the present invention includes any DNA encoding the amino acid sequence of SEQ ID NO: 1. Additionally, as described above, it is generally known that, when an amino acid sequence of a physiologically active protein is slightly modified, the physiological activity of the protein may be retained. Therefore, DNA encoding an HCV polymerase comprising the amino acid sequence from position 1 to 570 of SEQ ID NO: 1, wherein one or more amino acids are deleted, substituted, or added, which has an RNA-dependent RNA polymerase activity, and an amino acid sequence adjacent to the 570th amino acid residue required for column purification, is included in the present invention. The number of amino acids that are deleted, substituted, or added are 1 to 20 amino acids, preferably 1 to 10 amino acids, and more preferably 1 to 5 amino acids.

[0013]

To analyze the crystal structure of an HCV polymerase by the multiple heavy atom isomorphous replacement method, the HCV polymerase (native HCV polymerase) of SEQ ID NO: 1 was produced and purified by the genetic recombination method.

Additionally, selenoMet HCV polymerase (hereinafter referred to as the SeMet HCV polymerase or the SeMet heavy atom substitution product) in which a sulfur of Met of SEQ ID NO: 1 was substituted with selenium was isolated and purified by culturing transformants that resulted from genetic recombination in a medium in which selenomethionine (hereinafter referred to as SeMet) was added in place of Met.

[0014]

Crystal structure analysis of HCV polymerases

Each crystal of the native HCV polymerase and the selenoMet HCV polymerase was obtained by vapor diffusion. Heavy atom substitution products of each can be prepared by soaking the crystals of the native HCV polymerase in solutions containing platinum, uranium, and osmium. A structural coordinate can be determined by measuring diffraction intensity for the crystals of the obtained heavy atom substitution products and calculating the phase angle by the multiple heavy atom

isomorphous replacement method.

The multiple heavy atom isomorphous replacement method is a method for determining the phase angle of native proteins, comprising comparing diffraction intensity data of protein crystals to which a heavy atom is attached, and that of native protein crystals to which a heavy atom is not attached (a native protein), obtained by x-ray analysis (Experimental Chemistry Course 10, Diffraction, Japanese Society of Chemistry, 253-260 (1992)).

According to the principle of the multiple heavy atom isomorphous replacement method, there is a relationship between each reflection of a structural factor from crystals with a heavy atom (F_{PH}), a structural factor of the native crystal data (F_P), and contribution of the introduced heavy atom (F_H):

[Formula 1] $F_{PH} = F_P + F_H$

$|F_{PH}|$ and $|F_P|$ are numerical values obtained from the experiment. From these data, the location of the heavy atom can be determined, and $|F_H|$ can be calculated to determine the phase angle of each reflection. Subsequently, the structures of the HCV polymerases were determined by obtaining the electron density.

These calculations can be performed using program software DENZO, Shelx, MLPHARE, SHARP, DM, O, etc. The structural coordinates are shown in Table 2 of Example 2.

It is known that in general, even if a structural coordinate for the location of each atom is changed to some extent on a computer, the structure does not largely change and the protein activity is not lost. Therefore, structural coordinates substantially equivalent to those for the HCV polymerases of the present invention include derivative structural coordinates prepared by artificially processing the structural coordinates of the HCV polymerases. Such derivative structural coordinates preferably include those shown in Table 2 in which the locations of the atoms are varied within the range of residual mean square deviation ± 0.5 Å or less, and more preferably, ± 0.2 Å or less from an original structural coordinate.

The structure of an HCV polymerase is shown in Fig. 1, consisting of Finger, Palm, Thumb, and Holder domains. The structure of the known

poliovirus polymerase (Structure 5, 1109-1122 (1997)) comprises Finger, Palm, and Thumb domains and the structures of Finger and Holder domains in HCV polymerase have not been revealed.

[0015]

Determination of the active site and "RNA binding cleft" of the HCV polymerase

The Palm domain of the HCV polymerase was revealed to have a structure similar to HIV reverse transcriptase, *E. coli* or Taq DNA-dependent DNA polymerase, and T7 DNA-dependent polymerase. Comparison of the conserved amino acids sequences between the active sites of these known Palm domains and the Palm domain of the HCV polymerase revealed that the active site is the space formed by Asp 220, 318, and 319, Lys 141, and Arg 158, and/or (2) the hydrophilic shallow cavity formed by Ser 282, Thr 287, and Asn 291.

The Thumb domain of the HCV polymerase can structurally move against the Palm and Finger domains and this movement results in the inner space of the Palm domain. This space was confirmed to be formed by the regions of amino acids 213 to 223, 310 to 325, and 348 to 366, by considering the crystal structure thereof. A compound existing in this space presumably inhibits spatial formation. It is rationally assumed that the above-described region of the Palm domain is an additional inhibitor-binding site. The inner space was revealed to be an additional inhibitor-binding site for HCV polymerase. The region may thus shift 1 to 20, preferably 1 to 10, and more preferably 1 to 5 amino acids.

The structural coordinate for the HCV polymerase can be used for the following purposes:

(a) for analyzing the crystal structure of a HCV polymerase variant;

(b) for analyzing the crystal structure of the cocomplex of an HCV polymerase bound to an inhibitor; and

(c) for evaluating the complementarity of a compound with the active site and/or the additional inhibitor-binding site of an HCV polymerase.

[0016]

Crystal structure analysis of a variant or a cocomplex of the HCV

polymerase

Using the structural coordinate for the HCV polymerase shown in Table 2 as models, the phase angle of a variant or a cocomplex of HCV polymerase can be determined. The structural coordinate for the cocomplex can be important information for enhancing the quality of designing and evaluating a compound having a complementarity with the HCV polymerase active site and/or the additional inhibitor-binding site.

In the molecular replacement method, rotational function is calculated from the crystal diffraction intensity data of the variant or the cocomplex of the HCV polymerase and model to determine the orientation of the molecule, and the location of the molecule is determined by calculating the translational function (Acta Crystallogr., 23, 544 (1967)).

This method can be performed by using Amore of program software CCP4 (Council for the Central Laboratory of the Research Councils), Almn of CCP4, etc.

[0017]

Designing of compounds having HCV polymerase-inhibiting activity and evaluating the inhibiting activity

Since RNA replication is carried out in the active site of HCV polymerase, a compound having structural complementarity with the active site would inhibit the polymerase activity. A compound having a complementarity with an additional inhibitor-binding site is presumed to indirectly inhibit polymerase activity.

Such information on the active site and the additional inhibitor-binding site is important for selecting compounds having an HCV polymerase-inhibiting activity using computers and such. Specifically, the binding stability (complementarity) of compounds having HCV polymerase-inhibiting activity with the active site and/or the additional inhibitor-binding site can be compared for selection using computers and such. A leading compound having a complementarity with the active site and/or the additional inhibitor-binding site, and the derivative peripheral compounds can be rationally designed. Furthermore, in synthesis experiments, useless syntheses can be

obviated, and biological activity tests can be efficiently performed.

Complementarity with the active site and/or the additional inhibitor-binding site can be determined, for example, by inputting the structural coordinates of an HCV polymerase and of a test sample to virtual screening programs such as DOCK4 (UCSF) using computers, and obtaining a state in which the test sample is incorporated into the HCV polymerase active site and/or the additional inhibitor-binding site, as a numerical value stable in terms of conformation and energy, or as a visual model. Moreover, the complementarity of the test sample can be obtained using a part of the structural coordinate for the HCV polymerase.

As a virtual screening program, FLEXY DOCK (Tripos) can be used in addition to DOCK4.

As the structural coordinate for the test sample, one obtained from a database having three-dimensional structures of chemical compounds can be used. Alternatively, data obtained by calculating the three-dimensional conformation using program software such as Quanta, Sybyl (Tripos), Insight II (MSI) can be used.

The HCV polymerase-inhibiting activity can be evaluated by comparing the thus-obtained complementarity with the active site and/or the additional inhibitor-binding site of the HCV polymerase.

The molecule of an inhibitor can be designed so as to have the complementarity with the active site and/or the additional inhibitor-binding site, based on the structure of the test sample. The molecules can be designed using the above-described program software Quanta, Sybyl, Insight II, DOCK4, FLEXY DOCK, etc.

[0018]

Screening of an HCV polymerase inhibitor

The HCV polymerase-inhibiting activity can be measured by synthesizing a compound having complementarity with the active site of the HCV polymerase evaluated by the above-described virtual screening, and contacting the synthesized compound with the HCV polymerase in the presence of a template RNA and a substrate ribonucleoside triphosphate (rNTP).

The present invention is specifically illustrated below.

[0019]

[Example 1]

Expression and purification of the native HCV polymerase

As the DNA fragment to be used, a cDNA comprising the His-tag consisting of GSHHHHHH at the C-terminus (SEQ ID NO: 2) was prepared by PCR, using as a template, pDEM22 into which cDNA of HCV-BK was introduced (purchased from the Research Institute for Microbial Diseases of Osaka University), and a set of primers 5BNdel1FW (SEQ ID NO: 3) and 5B570HRV (SEQ ID NO: 4). The resulting fragment was inserted into pCR2.1 vector, the sequence was confirmed, and an approximately 1.8 kDa fragment was obtained by partial digestion with *Nde*1 and *E. co*R1.

The thus-obtained fragment was inserted into the *Nde*I and *Eco*RI sites in pET17b vector comprising T7 promoter (NOVAGEN), and the vector was used to transform *E. coli* BL21 (DE3) (NOVAGEN).

The transformants were cultured in 2x YT medium at 30°C. When OD_{620} reached 0.8 to 1.0, IPTG was added thereto to a final concentration of 0.5 mM, and the transformants were further incubated at 30°C for 3 hours to induce production of the target protein.

The resulting cultures were disrupted with a microfluidizer and the soluble fraction thereof was isolated and purified by subsequently adding Ni-NTA agarose thereto, eluting with Mono-S 5/5 (PHARMACIA), and performing gel filtration with Sephacryl S-200 (PHARMACIA).

By analyzing the amino acid sequence of the obtained native HCV polymerase and SeMet heavy atom substitution product, Met at the N-terminus were found to be cleaved. The amino acid sequence is shown in SEQ ID NO: 1.

Expression and purification of SeMet heavy atom substitution product

In the same manner as in the expression and purification of the native HCV polymerase, the 1.8 kD fragment obtained from pDEM22 was inserted into *Nde*I and *Eco*RI sites of pET17b (NOVAGEN), which was used to transform *E. coli* B834 (DE3) (NOVAGEN).

The resulting transformants were cultured in the medium for SeMet substitution in Table 1 at 30°C. When OD_{620} reached 0.8 to 1.0, IPTG

was added thereto to a final concentration of 0.5 mM, and the transformants were further cultured at 30°C for 3 hours to induce the production of the target protein. The soluble fraction was purified in the same manner as the native HCV polymerase.

[Table 1]

Composition of the medium for SeMet substitution

1. Amino acids (g/ml)			
Ala	1.50	Leu	0.70
Arg	1.75	Lys.HCl	1.26
Asp	1.20	Phe	0.40
Cys.HCl/H_2O	0.10	Pro	0.30
Glu	2.00	Ser	6.25
Gln	1.00	Thr	0.70
Gly	1.63	Tyr	0.50
His	0.18	Val	0.70
Ile	0.70		
2. Salts (g/ml)			
Adenosine	1.00	Na-Ac.$3H_2O$	1.50
Guanosine	1.33	Am-Cl	1.50
Thymine	0.33	NaOH	0.85
Uracil	1.00	K_2HPO_4	10.50
Succinic acid	3.00		
3. Metal, selenomethionine, and others			
$MgSO_4.7H_2O$	0.25	Glucose	20.00
$FeSO_4.7H_2O$	0.0042	SeMet	0.75
4. Vitamins			
KAO and MICHAYLUK BASAL VITAMIN solution			10.00 ml/l

Met at the N-terminus in the SeMet heavy atom substitution product was cleaved like in the native HCV polymerase. Additionally, as a result of LC-MS, all sulfur atoms of 12 methionines were replaced by SeMet.

[0020]

[Example 2]

Crystal structure analysis of the HCV polymerase

The resulting native HCV polymerase was crystallized by vapor diffusion in a solution containing 21 to 28% (w/v) polyethylene glycol 4000, 0.2 to 0.35 M ammonium acetate, 0.1 M sodium acetate (NaH acetate), and 0.02 M TES (pH 6.0 to 7.5) at 22.5°C for 2 to 4 weeks. The crystals were then soaked in a solution the composition of which is described above containing heavy atoms, such as platinum, uranium, or osmium, to obtain each heavy atom substitution products.

SelenoMet HCV polymerase was also crystallized by vapor diffusion in the solution containing 21 to 28% (w/v) polyethylene glycol 4000, 0.2 to 0.35 M ammonium acetate, 0.1 M sodium acetate (NaH acetate), and 0.02 M TES (pH 6.0 to 7.5) at 22.5°C for 2 to 4 weeks.

Diffraction intensity of the obtained platinum heavy atom substitution product, uranium heavy atom substitution product, and osmium heavy atom substitution product, as well as the selenoMet HCV polymerase were measured using Raxis IIc (Rigaku), and BL6B of synchrotron facility KEK-PF, and BL45XU of SPring-8.

The X-ray data for the platinum heavy atom substitution product, the uranium heavy atom substitution product, and the osmium heavy atom substitution product were processed with program software DENSO (HKL) and SCALA of program software CCP4 (Council for the Central Laboratory of the Research Councils) for determining the phase angle of each atom. The first locations of the heavy atoms were determined from the data of the uranium heavy atom substitution product and the osmium heavy atom substitution product with Shelx (Professor Sheldrick; Crystallographic Computing 3, Clarendon Press, Oxford 184 - 189 (1985)). Subsequently, the locations of each heavy atom were determined using the program software MLPHARE in CCP4 and SHARP (Buster). The electron density and expansion of the phase within 2.5 Å were calculated using the program software DM in CCP4 to prepare the Fourier map.

The SeMet HCV polymerase comprises the amino acid sequence of SEQ ID NO: 1 in which seleniums bind to 12 Met residues. The differential Fourier map was prepared for this SeMet HCV polymerase in the same manner as described above. The differential Fourier map measured at ? = 1.0400 Å to ? = 0.9797 Å, in which 11 peaks were confirmed, was used as a guide for the structure determination.

The structure of the HCV polymerase was determined based on the obtained Fourier map data using the program software O (DatOno AB).

Refinement and model construction was performed using torsion angle or maximum likelihood refinement of the program software X-PLOR98 (MSI). Ramachandran plot obtained by using the program software PROCHECK (J. Appl. Cryst. 26, 283-290 (1993)) confirmed that there was no amino acid residue with unacceptable structure.

The structural coordinates were shown in Table 2.

[0021]

[Table 2]

Molecular coordinates of structure of the HCV polymerase

Atom type				Numbers	X	Y	Z	Occ	B
atom	1	CB	SER	1	24.615	6.350	-7.710	1.00	19.81
atom	2	OG	SER	1	24.500	6.810	-6.383	1.00	36.98
atom	3	C	SER	1	24.207	3.988	-7.222	1.00	20.96
atom	4	O	SER	1	23.797	3.619	-6.121	1.00	22.47
atom	5	N	SER	1	22.317	5.586	-7.348	1.00	21.52
atom	6	CA	SER	1	23.643	5.214	-7.901	1.00	19.97
atom	7	N	MET	2	25.168	3.366	-7.890	1.00	22.02
atom	8	CA	MET	2	25.818	2.178	-7.371	1.00	18.83
atom	9	CB	MET	2	26.311	1.300	-8.529	1.00	15.87
atom	10	CG	MET	2	25.192	0.754	-9.385	1.00	12.26
atom	11	SD	MET	2	24.199	-0.528	-8.599	1.00	19.68
atom	12	CE	MET	2	25.523	-1.702	-8.326	1.00	16.41
atom	13	C	MET	2	26.982	2.632	-6.499	1.00	18.00
atom	14	O	MET	2	27.704	3.559	-6.848	1.00	20.36
atom	15	N	SER	3	27.125	1.995	-5.347	1.00	17.17
atom	16	CA	SER	3	28.193	2.303	-4.408	1.00	15.22
atom	17	CB	SER	3	28.112	1.331	-3.224	1.00	9.86
atom	18	OG	SER	3	28.119	-0.017	-3.665	1.00	12.66
atom	19	C	SER	3	29.550	2.172	-5.117	1.00	14.45
atom	20	O	SER	3	30.471	2.940	-4.866	1.00	13.70
atom	21	N	PHE	4	29.659	1.186	-6.000	1.00	14.77
atom	22	CA	PHE	4	30.890	0.957	-6.744	1.00	19.88
atom	23	CB	PHE	4	31.812	-0.047	-6.033	1.00	23.74

	atom	24	CG	PHE	4	32.057	0.229	-4.581	1.00	26.75
	atom	25	CD1	PHE	4	31.249	-0.352	-3.600	1.00	23.97
	atom	26	CD2	PHE	4	33.154	0.987	-4.182	1.00	24.31
	atom	27	CE1	PHE	4	31.541	-0.188	-2.249	1.00	24.09
	atom	28	CE2	PHE	4	33.451	1.154	-2.820	1.00	27.00
	atom	29	CZ	PHE	4	32.641	0.562	-1.854	1.00	19.89
	atom	30	C	PHE	4	30.683	0.400	-8.163	1.00	17.64
	atom	31	O	PHE	4	29.662	-0.222	-8.495	1.00	12.62
	atom	32	N	THR	5	31.691	0.622	-8.991	1.00	16.67
	atom	33	CA	THR	5	31.693	0.084	-10.333	1.00	19.10
	atom	34	CB	THR	5	31.563	1.166	-11.406	1.00	19.98
	atom	35	OG1	THR	5	30.178	1.414	-11.658	1.00	14.84
	atom	36	CG2	THR	5	32.225	0.708	-12.703	1.00	23.26
	atom	37	C	THR	5	33.060	-0.534	-10.416	1.00	17.73
	atom	38	O	THR	5	34.040	0.124	-10.115	1.00	21.51
	atom	39	N	TRP	6	33.141	-1.798	-10.800	1.00	18.17
	atom	40	CA	TRP	6	34.447	-2.441	-10.893	1.00	16.52
	atom	41	CB	TRP	6	34.431	-3.741	-10.095	1.00	14.71
	atom	42	CG	TRP	6	33.933	-3.587	-8.685	1.00	15.01
	atom	43	CD2	TRP	6	34.625	-2.965	-7.596	1.00	9.45
	atom	44	CE2	TRP	6	33.810	-3.094	-6.452	1.00	14.30
	atom	45	CE3	TRP	6	35.857	-2.312	-7.478	1.00	12.59
	atom	46	CD1	TRP	6	32.752	-4.054	-8.174	1.00	15.49
	atom	47	NE1	TRP	6	32.673	-3.762	-6.826	1.00	18.66
	atom	48	CZ2	TRP	6	34.186	-2.594	-5.209	1.00	13.56
	atom	49	CZ3	TRP	6	36.236	-1.814	-6.243	1.00	14.08
	atom	50	CH2	TRP	6	35.399	-1.958	-5.121	1.00	15.20
	atom	51	C	TRP	6	34.876	-2.744	-12.329	1.00	18.10
	atom	52	O	TRP	6	34.054	-3.095	-13.166	1.00	14.63
	atom	53	N	THR	7	36.164	-2.581	-12.613	1.00	20.86
	atom	54	CA	THR	7	36.684	-2.922	-13.927	1.00	21.23
	atom	55	CB	THR	7	38.051	-2.263	-14.227	1.00	19.89
	atom	56	OG1	THR	7	39.035	-2.698	-13.271	1.00	10.28
	atom	57	CG2	THR	7	37.928	-0.732	-14.208	1.00	10.61
	atom	58	C	THR	7	36.892	-4.424	-13.807	1.00	28.25
	atom	59	O	THR	7	35.955	-5.177	-13.522	1.00	30.75

	atom	60	N	GLY	8	38.122	-4.869	-13.995	1.00	32.31
	atom	61	CA	GLY	8	38.387	-6.294	-13.877	1.00	32.09
	atom	62	C	GLY	8	39.501	-6.552	-12.886	1.00	27.41
	atom	63	O	GLY	8	39.603	-7.632	-12.307	1.00	28.66
	atom	64	N	ALA	9	40.315	-5.525	-12.690	1.00	21.96
	atom	65	CA	ALA	9	41.459	-5.567	-11.812	1.00	24.06
	atom	66	CB	ALA	9	42.069	-4.180	-11.701	1.00	26.37
	atom	67	C	ALA	9	41.225	-6.138	-10.422	1.00	27.48
	atom	68	O	ALA	9	40.246	-5.838	-9.725	1.00	28.80
	atom	69	N	LEU	10	42.171	-6.973	-10.038	1.00	26.03
	atom	70	CA	LEU	10	42.171	-7.612	-8.753	1.00	26.49
	atom	71	CB	LEU	10	43.089	-8.836	-8.797	1.00	25.66
	atom	72	CG	LEU	10	42.592	-10.114	-9.491	1.00	22.22
	atom	73	CD1	LEU	10	42.023	-11.035	-8.426	1.00	23.73
	atom	74	CD2	LEU	10	41.542	-9.810	-10.557	1.00	21.47
	atom	75	C	LEU	10	42.745	-6.582	-7.812	1.00	27.99
	atom	76	O	LEU	10	43.605	-5.793	-8.216	1.00	28.88
	atom	77	N	ILE	11	42.258	-6.546	-6.575	1.00	27.29
	atom	78	CA	ILE	11	42.831	-5.609	-5.632	1.00	25.24
	atom	79	CB	ILE	11	41.996	-5.492	-4.364	1.00	26.22
	atom	80	CG2	ILE	11	42.562	-4.410	-3.489	1.00	26.85
	atom	81	CG1	ILE	11	40.540	-5.183	-4.725	1.00	30.09
	atom	82	CD1	ILE	11	40.284	-3.764	-5.097	1.00	27.52
	atom	83	C	ILE	11	44.177	-6.263	-5.335	1.00	23.52
	atom	84	O	ILE	11	44.247	-7.461	-5.118	1.00	21.33
	atom	85	N	THR	12	45.252	-5.491	-5.356	1.00	24.75
	atom	86	CA	THR	12	46.569	-6.073	-5.138	1.00	25.91
	atom	87	CB	THR	12	47.484	-5.705	-6.289	1.00	23.30
	atom	88	OG1	THR	12	47.454	-4.286	-6.470	1.00	23.54
	atom	89	CG2	THR	12	47.010	-6.373	-7.562	1.00	21.39
	atom	90	C	THR	12	47.291	-5.712	-3.849	1.00	26.85
	atom	91	O	THR	12	47.185	-4.592	-3.357	1.00	27.97
	atom	92	N	PRO	13	48.049	-6.673	-3.296	1.00	30.99
	atom	93	CD	PRO	13	48.219	-8.037	-3.841	1.00	32.88
	atom	94	CA	PRO	13	48.814	-6.485	-2.058	1.00	30.49
	atom	95	CB	PRO	13	48.990	-7.905	-1.531	1.00	27.31

	atom	96	CG	PRO	13	49.045	-8.749	-2.774	1.00	31.69
	atom	97	C	PRO	13	50.153	-5.834	-2.384	1.00	33.48
	atom	98	O	PRO	13	50.732	-6.108	-3.434	1.00	29.13
	atom	99	N	CYS	14	50.637	-4.969	-1.495	1.00	37.83
	atom	100	CA	CYS	14	51.924	-4.306	-1.707	1.00	40.41
	atom	101	CB	CYS	14	51.845	-2.819	-1.342	1.00	41.31
	atom	102	SG	CYS	14	50.879	-2.468	0.142	1.00	45.04
	atom	103	C	CYS	14	52.974	-4.973	-0.837	1.00	41.54
	atom	104	O	CYS	14	54.170	-4.966	-1.153	1.00	43.25
	atom	105	N	ALA	15	52.512	-5.558	0.262	1.00	42.38
	atom	106	CA	ALA	15	53.406	-6.220	1.201	1.00	41.22
	atom	107	CB	ALA	15	53.215	-5.641	2.605	1.00	38.95
	atom	108	C	ALA	15	53.162	-7.716	1.228	1.00	39.95
	atom	109	O	ALA	15	52.159	-8.213	0.696	1.00	38.84
	atom	110	N	ALA	16	54.104	-8.442	1.818	1.00	34.51
	atom	111	CA	ALA	16	53.930	-9.866	1.949	1.00	31.02
	atom	112	CB	ALA	16	55.194	-10.500	2.489	1.00	25.93
	atom	113	C	ALA	16	52.819	-9.902	2.991	1.00	32.01
	atom	114	O	ALA	16	52.854	-9.153	3.972	1.00	35.44
	atom	115	N	GLU	17	51.808	-10.723	2.765	1.00	31.40
	atom	116	CA	GLU	17	50.728	-10.821	3.720	1.00	25.65
	atom	117	CB	GLU	17	49.384	-10.492	3.091	1.00	29.92
	atom	118	CG	GLU	17	49.378	-9.468	2.000	1.00	26.96
	atom	119	CD	GLU	17	48.061	-9.506	1.262	1.00	31.20
	atom	120	OE1	GLU	17	47.303	-8.512	1.353	1.00	31.11
	atom	121	OE2	GLU	17	47.780	-10.542	0.606	1.00	31.00
	atom	122	C	GLU	17	50.659	-12.228	4.254	1.00	24.37
	atom	123	O	GLU	17	50.558	-13.193	3.488	1.00	16.49
	atom	124	N	GLU	18	50.711	-12.315	5.580	1.00	26.31
	atom	125	CA	GLU	18	50.643	-13.560	6.331	1.00	27.86
	atom	126	CB	GLU	18	51.487	-13.416	7.588	1.00	33.75
	atom	127	CG	GLU	18	52.940	-13.790	7.411	1.00	42.26
	atom	128	CD	GLU	18	53.478	-14.542	8.610	1.00	45.68
	atom	129	OE1	GLU	18	54.480	-14.071	9.186	1.00	46.20
	atom	130	OE2	GLU	18	52.896	-15.596	8.973	1.00	44.75
	atom	131	C	GLU	18	49.194	-13.811	6.729	1.00	28.35

atom	132	O	GLU	18	48.479	-12.883	7.092	1.00	28.30
atom	133	N	SER	19	48.750	-15.058	6.709	1.00	31.05
atom	134	CA	SER	19	47.358	-15.320	7.073	1.00	33.57
atom	135	CB	SER	19	46.541	-15.546	5.803	1.00	32.07
atom	136	OG	SER	19	47.155	-16.529	4.995	1.00	26.70
atom	137	C	SER	19	47.144	-16.499	8.026	1.00	36.24
atom	138	O	SER	19	46.008	-16.848	8.363	1.00	37.27
atom	139	N	LYS	20	48.237	-17.121	8.445	1.00	37.71
atom	140	CA	LYS	20	48.175	-18.259	9.352	1.00	35.86
atom	141	CB	LYS	20	48.779	-19.485	8.668	1.00	35.67
atom	142	CG	LYS	20	47.766	-20.524	8.223	1.00	37.82
atom	143	CD	LYS	20	48.370	-21.929	8.248	1.00	45.38
atom	144	CE	LYS	20	49.657	-22.015	7.417	1.00	47.94
atom	145	NZ	LYS	20	49.634	-23.081	6.357	1.00	48.32
atom	146	C	LYS	20	48.990	-17.878	10.588	1.00	36.00
atom	147	O	LYS	20	50.104	-17.366	10.452	1.00	36.12
atom	148	N	LEU	21	48.446	-18.103	11.785	1.00	35.14
atom	149	CA	LEU	21	49.178	-17.741	13.007	1.00	34.18
atom	150	CB	LEU	21	48.516	-18.339	14.267	1.00	36.43
atom	151	CG	LEU	21	48.975	-17.939	15.691	1.00	30.38
atom	152	CD1	LEU	21	50.310	-17.254	15.675	1.00	31.18
atom	153	CD2	LEU	21	47.942	-17.022	16.322	1.00	28.34
atom	154	C	LEU	21	50.618	-18.228	12.913	1.00	31.20
atom	155	O	LEU	21	50.866	-19.432	12.792	1.00	27.71
atom	156	N	PRO	22	51.577	-17.281	12.926	1.00	31.77
atom	157	CD	PRO	22	51.257	-15.845	12.943	1.00	32.75
atom	158	CA	PRO	22	53.027	-17.494	12.854	1.00	33.02
atom	159	CB	PRO	22	53.602	-16.080	12.757	1.00	34.77
atom	160	CG	PRO	22	52.459	-15.238	12.270	1.00	31.70
atom	161	C	PRO	22	53.577	-18.248	14.057	1.00	35.52
atom	162	O	PRO	22	54.670	-17.941	14.541	1.00	39.97
atom	163	N	ILE	23	52.782	-19.214	14.525	1.00	33.76
atom	164	CA	ILE	23	53.067	-20.110	15.642	1.00	28.93
atom	165	CB	ILE	23	52.882	-21.575	15.161	1.00	30.29
atom	166	CG2	ILE	23	54.202	-22.339	15.182	1.00	31.56
atom	167	CG1	ILE	23	51.826	-22.264	16.010	1.00	29.81

	atom	168	CD1	ILE	23	51.915	-23.783	15.946	1.00	33.17
	atom	169	C	ILE	23	54.434	-19.914	16.306	1.00	31.58
	atom	170	O	ILE	23	55.486	-20.053	15.680	1.00	28.96
	atom	171	N	ASN	24	54.403	-19.595	17.596	1.00	36.15
	atom	172	CA	ASN	24	55.623	-19.326	18.353	1.00	36.92
	atom	173	CB	ASN	24	55.811	-17.826	18.535	1.00	35.49
	atom	174	CG	ASN	24	57.211	-17.402	18.268	1.00	39.09
	atom	175	OD1	ASN	24	58.005	-18.174	17.708	1.00	35.90
	atom	176	ND2	ASN	24	57.545	-16.169	18.658	1.00	36.56
	atom	177	C	ASN	24	55.623	-19.921	19.730	1.00	37.12
	atom	178	O	ASN	24	54.564	-20.146	20.306	1.00	38.65
	atom	179	N	ALA	25	56.825	-20.137	20.263	1.00	37.93
	atom	180	CA	ALA	25	56.986	-20.664	21.612	1.00	36.25
	atom	181	CB	ALA	25	58.450	-20.598	22.038	1.00	41.30
	atom	182	C	ALA	25	56.156	-19.764	22.504	1.00	33.09
	atom	183	O	ALA	25	55.277	-20.225	23.230	1.00	33.51
	atom	184	N	LEU	26	56.443	-18.470	22.421	1.00	29.60
	atom	185	CA	LEU	26	55.737	-17.467	23.203	1.00	29.75
	atom	186	CB	LEU	26	56.335	-16.078	22.959	1.00	26.81
	atom	187	CG	LEU	26	57.677	-15.709	23.610	1.00	27.04
	atom	188	CD1	LEU	26	57.539	-14.365	24.295	1.00	26.61
	atom	189	CD2	LEU	26	58.123	-16.783	24.604	1.00	27.73
	atom	190	C	LEU	26	54.252	-17.429	22.877	1.00	32.30
	atom	191	O	LEU	26	53.427	-17.261	23.775	1.00	38.97
	atom	192	N	SER	27	53.909	-17.587	21.601	1.00	34.14
	atom	193	CA	SER	27	52.511	-17.540	21.178	1.00	35.15
	atom	194	CB	SER	27	52.418	-17.562	19.649	1.00	38.08
	atom	195	OG	SER	27	51.567	-18.611	19.191	1.00	41.49
	atom	196	C	SER	27	51.744	-18.716	21.753	1.00	36.62
	atom	197	O	SER	27	50.517	-18.697	21.846	1.00	35.95
	atom	198	N	ASN	28	52.478	-19.744	22.149	1.00	37.71
	atom	199	CA	ASN	28	51.851	-20.931	22.691	1.00	38.81
	atom	200	CB	ASN	28	52.718	-22.153	22.416	1.00	45.85
	atom	201	CG	ASN	28	51.909	-23.316	21.922	1.00	50.58
	atom	202	OD1	ASN	28	50.729	-23.162	21.607	1.00	52.35
	atom	203	ND2	ASN	28	52.526	-24.493	21.856	1.00	55.39

	atom	204	C	ASN	28	51.644	-20.760	24.174	1.00	36.71
	atom	205	O	ASN	28	50.876	-21.488	24.808	1.00	31.88
	atom	206	N	SER	29	52.354	-19.797	24.738	1.00	36.39
	atom	207	CA	SER	29	52.196	-19.537	26.150	1.00	34.80
	atom	208	CB	SER	29	53.126	-18.395	26.573	1.00	33.44
	atom	209	OG	SER	29	52.570	-17.618	27.622	1.00	33.63
	atom	210	C	SER	29	50.724	-19.143	26.321	1.00	32.24
	atom	211	O	SER	29	50.012	-19.678	27.173	1.00	34.07
	atom	212	N	LEU	30	50.264	-18.265	25.439	1.00	26.71
	atom	213	CA	LEU	30	48.909	-17.732	25.486	1.00	22.98
	atom	214	CB	LEU	30	48.929	-16.350	24.841	1.00	13.41
	atom	215	CG	LEU	30	47.590	-15.686	24.685	1.00	11.37
	atom	216	CD1	LEU	30	46.943	-15.550	26.053	1.00	10.68
	atom	217	CD2	LEU	30	47.782	-14.316	23.995	1.00	12.95
	atom	218	C	LEU	30	47.750	-18.538	24.895	1.00	23.77
	atom	219	O	LEU	30	46.774	-18.840	25.589	1.00	19.47
	atom	220	N	LEU	31	47.851	-18.847	23.604	1.00	25.99
	atom	221	CA	LEU	31	46.813	-19.569	22.869	1.00	27.93
	atom	222	CB	LEU	31	46.394	-18.747	21.650	1.00	29.38
	atom	223	CG	LEU	31	45.016	-19.009	21.042	1.00	32.97
	atom	224	CD1	LEU	31	44.290	-17.677	20.859	1.00	33.11
	atom	225	CD2	LEU	31	45.163	-19.713	19.714	1.00	32.09
	atom	226	C	LEU	31	47.354	-20.899	22.395	1.00	28.14
	atom	227	O	LEU	31	48.539	-21.007	22.109	1.00	36.72
	atom	228	N	ARG	32	46.501	-21.906	22.282	1.00	27.63
	atom	229	CA	ARG	32	46.965	-23.211	21.843	1.00	31.68
	atom	230	CB	ARG	32	46.734	-24.244	22.950	1.00	35.08
	atom	231	CG	ARG	32	46.617	-25.690	22.473	1.00	45.43
	atom	232	CD	ARG	32	46.597	-26.660	23.656	1.00	51.44
	atom	233	NE	ARG	32	47.611	-26.312	24.654	1.00	55.47
	atom	234	CZ	ARG	32	48.555	-27.144	25.098	1.00	59.15
	atom	235	NH1	ARG	32	48.630	-28.387	24.639	1.00	59.61
	atom	236	NH2	ARG	32	49.439	-26.729	25.999	1.00	59.58
	atom	237	C	ARG	32	46.329	-23.692	20.535	1.00	34.21
	atom	238	O	ARG	32	46.954	-24.437	19.781	1.00	37.41
	atom	239	N	HIS	33	45.100	-23.268	20.261	1.00	30.97

atom	240	CA	HIS	33	44.403	-23.682	19.050	1.00	29.86
atom	241	CB	HIS	33	42.913	-23.832	19.347	1.00	25.30
atom	242	CG	HIS	33	42.590	-24.933	20.309	1.00	27.22
atom	243	CD2	HIS	33	43.384	-25.838	20.931	1.00	25.12
atom	244	ND1	HIS	33	41.297	-25.240	20.678	1.00	22.69
atom	245	CE1	HIS	33	41.309	-26.291	21.479	1.00	24.23
atom	246	NE2	HIS	33	42.562	-26.673	21.647	1.00	24.92
atom	247	C	HIS	33	44.607	-22.679	17.902	1.00	34.35
atom	248	O	HIS	33	43.651	-22.258	17.253	1.00	35.14
atom	249	N	HIS	34	45.862	-22.319	17.651	1.00	36.99
atom	250	CA	HIS	34	46.239	-21.351	16.616	1.00	39.78
atom	251	CB	HIS	34	47.749	-21.334	16.484	1.00	43.43
atom	252	CG	HIS	34	48.318	-22.677	16.160	1.00	49.87
atom	253	CD2	HIS	34	48.882	-23.158	15.028	1.00	49.82
atom	254	ND1	HIS	34	48.287	-23.729	17.050	1.00	53.37
atom	255	CE1	HIS	34	48.807	-24.801	16.481	1.00	50.98
atom	256	NE2	HIS	34	49.176	-24.480	15.254	1.00	53.57
atom	257	C	HIS	34	45.655	-21.542	15.216	1.00	39.91
atom	258	O	HIS	34	45.705	-20.626	14.401	1.00	41.33
atom	259	N	ASN	35	45.131	-22.719	14.908	1.00	39.73
atom	260	CA	ASN	35	44.582	-22.914	13.577	1.00	39.95
atom	261	CB	ASN	35	44.399	-24.402	13.279	1.00	37.14
atom	262	CG	ASN	35	45.702	-25.077	12.867	1.00	38.81
atom	263	OD1	ASN	35	45.968	-26.219	13.251	1.00	42.14
atom	264	ND2	ASN	35	46.519	-24.373	12.085	1.00	35.23
atom	265	C	ASN	35	43.268	-22.169	13.377	1.00	40.50
atom	266	O	ASN	35	42.869	-21.926	12.239	1.00	46.41
atom	267	N	MET	36	42.605	-21.803	14.473	1.00	38.40
atom	268	CA	MET	36	41.336	-21.065	14.424	1.00	34.96
atom	269	CB	MET	36	40.556	-21.218	15.722	1.00	37.72
atom	270	CG	MET	36	40.787	-22.501	16.445	1.00	37.63
atom	271	SD	MET	36	39.308	-23.485	16.471	1.00	44.15
atom	272	CE	MET	36	38.048	-22.366	15.876	1.00	36.51
atom	273	C	MET	36	41.566	-19.583	14.242	1.00	34.31
atom	274	O	MET	36	40.620	-18.822	14.045	1.00	34.77
atom	275	N	VAL	37	42.822	-19.175	14.337	1.00	31.07

	atom	276	CA	VAL	37	43.164	-17.776	14.214	1.00	32.28
	atom	277	CB	VAL	37	44.192	-17.396	15.295	1.00	31.84
	atom	278	CG1	VAL	37	44.702	-15.975	15.072	1.00	34.67
	atom	279	CG2	VAL	37	43.539	-17.516	16.666	1.00	30.30
	atom	280	C	VAL	37	43.706	-17.502	12.824	1.00	33.06
	atom	281	O	VAL	37	44.619	-18.173	12.356	1.00	35.02
	atom	282	N	TYR	38	43.130	-16.515	12.154	1.00	33.97
	atom	283	CA	TYR	38	43.562	-16.188	10.802	1.00	33.09
	atom	284	CB	TYR	38	42.636	-16.833	9.781	1.00	30.61
	atom	285	CG	TYR	38	41.276	-16.182	9.737	1.00	27.68
	atom	286	CD1	TYR	38	41.024	-15.102	8.893	1.00	28.07
	atom	287	CE1	TYR	38	39.749	-14.538	8.800	1.00	26.20
	atom	288	CD2	TYR	38	40.223	-16.677	10.497	1.00	26.97
	atom	289	CE2	TYR	38	38.950	-16.120	10.409	1.00	25.44
	atom	290	CZ	TYR	38	38.723	-15.058	9.558	1.00	26.86
	atom	291	OH	TYR	38	37.461	-14.532	9.455	1.00	32.29
	atom	292	C	TYR	38	43.574	-14.700	10.547	1.00	32.08
	atom	293	O	TYR	38	43.116	-13.908	11.374	1.00	30.92
	atom	294	N	ALA	39	44.087	-14.338	9.375	1.00	28.55
	atom	295	CA	ALA	39	44.165	-12.948	8.979	1.00	28.45
	atom	296	CB	ALA	39	45.608	-12.468	9.041	1.00	23.97
	atom	297	C	ALA	39	43.594	-12.767	7.574	1.00	31.83
	atom	298	O	ALA	39	43.770	-13.623	6.699	1.00	31.03
	atom	299	N	THR	40	42.883	-11.658	7.379	1.00	32.22
	atom	300	CA	THR	40	42.295	-11.340	6.097	1.00	32.30
	atom	301	CB	THR	40	41.192	-10.271	6.223	1.00	32.04
	atom	302	OG1	THR	40	41.737	-9.079	6.801	1.00	31.49
	atom	303	CG2	THR	40	40.043	-10.780	7.072	1.00	22.68
	atom	304	C	THR	40	43.392	-10.800	5.186	1.00	34.32
	atom	305	O	THR	40	44.292	-10.085	5.638	1.00	36.01
	atom	306	N	THR	41	43.303	-11.156	3.907	1.00	33.54
	atom	307	CA	THR	41	44.262	-10.740	2.896	1.00	31.42
	atom	308	CB	THR	41	45.311	-11.839	2.630	1.00	33.49
	atom	309	OG1	THR	41	44.649	-13.064	2.287	1.00	32.00
	atom	310	CG2	THR	41	46.167	-12.068	3.866	1.00	37.87
	atom	311	C	THR	41	43.566	-10.435	1.574	1.00	31.50

	atom	312	O	THR	41	42.326	-10.504	1.472	1.00	27.16
	atom	313	N	SER	42	44.391	-10.097	0.582	1.00	29.63
	atom	314	CA	SER	42	43.967	-9.756	-0.776	1.00	28.20
	atom	315	CB	SER	42	45.192	-9.565	-1.656	1.00	30.81
	atom	316	OG	SER	42	45.298	-8.231	-2.094	1.00	39.87
	atom	317	C	SER	42	43.115	-10.848	-1.396	1.00	25.35
	atom	318	O	SER	42	42.025	-10.609	-1.913	1.00	21.99
	atom	319	N	ARG	43	43.624	-12.063	-1.335	1.00	25.18
	atom	320	CA	ARG	43	42.926	-13.195	-1.903	1.00	23.99
	atom	321	CB	ARG	43	43.474	-14.481	-1.280	1.00	21.84
	atom	322	CG	ARG	43	44.708	-15.021	-1.989	1.00	34.58
	atom	323	CD	ARG	43	45.881	-15.303	-1.030	1.00	41.59
	atom	324	NE	ARG	43	46.664	-16.489	-1.407	1.00	43.31
	atom	325	CZ	ARG	43	47.992	-16.516	-1.543	1.00	45.96
	atom	326	NH1	ARG	43	48.725	-15.428	-1.333	1.00	46.51
	atom	327	NH2	ARG	43	48.596	-17.643	-1.890	1.00	47.17
	atom	328	C	ARG	43	41.397	-13.127	-1.751	1.00	21.48
	atom	329	O	ARG	43	40.665	-13.661	-2.588	1.00	21.54
	atom	330	N	SER	44	40.916	-12.464	-0.699	1.00	20.73
	atom	331	CA	SER	44	39.477	-12.386	-0.450	1.00	18.28
	atom	332	CB	SER	44	39.178	-12.681	1.038	1.00	18.58
	atom	333	OG	SER	44	39.564	-11.610	1.875	1.00	22.43
	atom	334	C	SER	44	38.820	-11.076	-0.878	1.00	10.26
	atom	335	O	SER	44	37.604	-10.988	-0.915	1.00	8.87
	atom	336	N	ALA	45	39.633	-10.079	-1.207	1.00	9.16
	atom	337	CA	ALA	45	39.148	-8.773	-1.653	1.00	13.99
	atom	338	CB	ALA	45	40.284	-8.014	-2.343	1.00	12.36
	atom	339	C	ALA	45	37.955	-8.866	-2.615	1.00	17.56
	atom	340	O	ALA	45	37.075	-8.004	-2.623	1.00	24.87
	atom	341	N	GLY	46	37.947	-9.897	-3.448	1.00	19.30
	atom	342	CA	GLY	46	36.872	-10.054	-4.395	1.00	19.13
	atom	343	C	GLY	46	35.552	-10.383	-3.741	1.00	20.49
	atom	344	O	GLY	46	34.519	-9.850	-4.143	1.00	23.09
	atom	345	N	LEU	47	35.573	-11.274	-2.751	1.00	22.80
	atom	346	CA	LEU	47	34.352	-11.658	-2.061	1.00	20.06
	atom	347	CB	LEU	47	34.652	-12.661	-0.966	1.00	23.80

	atom	348	CG	LEU	47	34.922	-14.094	-1.410	1.00	26.51
	atom	349	CD1	LEU	47	36.115	-14.122	-2.356	1.00	26.05
	atom	350	CD2	LEU	47	35.178	-14.956	-0.177	1.00	22.24
	atom	351	C	LEU	47	33.721	-10.416	-1.455	1.00	21.63
	atom	352	O	LEU	47	32.500	-10.220	-1.538	1.00	24.60
	atom	353	N	ARG	48	34.560	-9.565	-0.877	1.00	18.18
	atom	354	CA	ARG	48	34.088	-8.342	-0.259	1.00	19.50
	atom	355	CB	ARG	48	35.244	-7.596	0.401	1.00	22.32
	atom	356	CG	ARG	48	34.838	-6.281	1.043	1.00	26.30
	atom	357	CD	ARG	48	33.658	-6.477	1.973	1.00	33.14
	atom	358	NE	ARG	48	33.967	-7.382	3.078	1.00	40:03
	atom	359	CZ	ARG	48	33.983	-7.028	4.364	1.00	43.86
	atom	360	NH1	ARG	48	33.703	-5.775	4.726	1.00	42.25
	atom	361	NH2	ARG	48	34.282	-7.931	5.293	1.00	44.38
	atom	362	C	ARG	48	33.419	-7.424	-1.251	1.00	17.84
	atom	363	O	ARG	48	32.400	-6.818	-0.947	1.00	14.07
	atom	364	N	GLN	49	34.013	-7.333	-2.437	1.00	20.45
	atom	365	CA	GLN	49	33.529	-6.475	-3.514	1.00	18.95
	atom	366	CB	GLN	49	34.364	-6.704	-4.766	1.00	24.56
	atom	367	CG	GLN	49	35.333	-5.596	-5.078	1.00	27.59
	atom	368	CD	GLN	49	36.429	-6.043	-6.013	1.00	34.35
	atom	369	OE1	GLN	49	36.874	-5.287	-6.875	1.00	34.28
	atom	370	NE2	GLN	49	36.870	-7.281	-5.852	1.00	37.66
	atom	371	C	GLN	49	32.070	-6.703	-3.847	1.00	21.29
	atom	372	O	GLN	49	31.343	-5.770	-4.182	1.00	26.05
	atom	373	N	LYS	50	31.634	-7.950	-3.753	1.00	21.64
	atom	374	CA	LYS	50	30.256	-8.284	-4.047	1.00	21.43
	atom	375	CB	LYS	50	30.120	-9.794	-4.253	1.00	23.00
	atom	376	CG	LYS	50	31.327	-10.449	-4.911	1.00	25.73
	atom	377	CD	LYS	50	31.297	-10.338	-6.413	1.00	26.60
	atom	378	CE	LYS	50	32.642	-9.850	-6.959	1.00	31.80
	atom	379	NZ	LYS	50	32.545	-8.444	-7.471	1.00	29.18
	atom	380	C	LYS	50	29.266	-7.839	-2.981	1.00	21.76
	atom	381	O	LYS	50	28.179	-7.346	-3.293	1.00	20.76
	atom	382	N	LYS	51	29.643	-8.019	-1.720	1.00	28.04
	atom	383	CA	LYS	51	28.765	-7.679	-0.599	1.00	27.56

	atom	384	CB	LYS	51	29.299	-8.305	0.697	1.00	29.34
	atom	385	CG	LYS	51	29.972	-9.669	0.548	1.00	35.02
	atom	386	CD	LYS	51	31.172	-9.790	1.517	1.00	39.48
	atom	387	CE	LYS	51	31.002	-10.934	2.506	1.00	40.47
	atom	388	NZ	LYS	51	29.573	-11.142	2.896	1.00	42.83
	atom	389	C	LYS	51	28.649	-6.184	-0.411	1.00	25.54
	atom	390	O	LYS	51	27.733	-5.688	0.246	1.00	26.24
	atom	391	N	VAL	52	29.585	-5.470	-1.012	1.00	23.97
	atom	392	CA	VAL	52	29.651	-4.028	-0.880	1.00	23.04
	atom	393	CB	VAL	52	31.131	-3.627	-0.667	1.00	21.28
	atom	394	CG1	VAL	52	31.788	-3.277	-1.980	1.00	20.30
	atom	395	CG2	VAL	52	31.224	-2.516	0.304	1.00	25.41
	atom	396	C	VAL	52	29.054	-3.257	-2.059	1.00	20.56
	atom	397	O	VAL	52	28.879	-2.049	-1.992	1.00	20.11
	atom	398	N	THR	53	28.716	-3.977	-3.118	1.00	21.10
	atom	399	CA	THR	53	28.194	-3.386	-4.342	1.00	19.82
	atom	400	CB	THR	53	28.854	-4.041	-5.577	1.00	19.39
	atom	401	OG1	THR	53	30.282	-3.902	-5.498	1.00	23.50
	atom	402	CG2	THR	53	28.355	-3.413	-6.854	1.00	17.91
	atom	403	C	THR	53	26.692	-3.490	-4.522	1.00	22.56
	atom	404	O	THR	53	26.142	-4.577	-4.648	1.00	23.43
	atom	405	N	PHE	54	26.025	-2.346	-4.572	1.00	22.26
	atom	406	CA	PHE	54	24.584	-2.347	-4.774	1.00	21.33
	atom	407	CB	PHE	54	23.869	-2.836	-3.515	1.00	17.15
	atom	408	CG	PHE	54	24.491	-2.366	-2.256	1.00	15.86
	atom	409	CD1	PHE	54	24.216	-1.104	-1.761	1.00	22.14
	atom	410	CD2	PHE	54	25.369	-3.182	-1.561	1.00	28.32
	atom	411	CE1	PHE	54	24.814	-0.645	-0.579	1.00	25.63
	atom	412	CE2	PHE	54	25.980	-2.745	-0.383	1.00	30.36
	atom	413	CZ	PHE	54	25.695	-1.466	0.110	1.00	30.97
	atom	414	C	PHE	54	24.152	-0.932	-5.117	1.00	21.37
	atom	415	O	PHE	54	24.984	-0.030	-5.201	1.00	20.91
	atom	416	N	ASP	55	22.852	-0.752	-5.308	1.00	20.45
	atom	417	CA	ASP	55	22.278	0.537	-5.644	1.00	20.71
	atom	418	CB	ASP	55	21.199	0.320	-6.724	1.00	19.49
	atom	419	CG	ASP	55	20.465	1.606	-7.126	1.00	20.04

	atom	420	OD1	ASP	55	21.096	2.544	-7.657	1.00	14.75
	atom	421	OD2	ASP	55	19.232	1.659	-6.909	1.00	23.17
	atom	422	C	ASP	55	21.689	1.237	-4.395	1.00	23.76
	atom	423	O	ASP	55	21.070	0.607	-3.527	1.00	26.43
	atom	424	N	ARG	56	21.890	2.543	-4.306	1.00	19.38
	atom	425	CA	ARG	56	21.352	3.289	-3.198	1.00	17.03
	atom	426	CB	ARG	56	22.466	4.038	-2.456	1.00	17.14
	atom	427	CG	ARG	56	23.506	3.137	-1.842	1.00	10.89
	atom	428	CD	ARG	56	24.709	3.061	-2.756	1.00	15.90
	atom	429	NE	ARG	56	25.638	4.162	-2.494	1.00	16.91
	atom	430	CZ	ARG	56	25.940	5.101	-3.385	1.00	27.75
	atom	431	NH1	ARG	56	25.389	5.091	-4.605	1.00	26.20
	atom	432	NH2	ARG	56	26.815	6.043	-3.074	1.00	30.07
	atom	433	C	ARG	56	20.331	4.291	-3.671	1.00	16.60
	atom	434	O	ARG	56	20.652	5.129	-4.484	1.00	17.50
	atom	435	N	LEU	57	19.101	4.193	-3.161	1.00	20.52
	atom	436	CA	LEU	57	18.023	5.144	-3.471	1.00	18.99
	atom	437	CB	LEU	57	16.756	4.437	-3.949	1.00	20.71
	atom	438	CG	LEU	57	16.780	3.703	-5.285	1.00	27.78
	atom	439	CD1	LEU	57	15.350	3.271	-5.624	1.00	21.44
	atom	440	CD2	LEU	57	17.375	4.614	-6.390	1.00	22.71
	atom	441	C	LEU	57	17.719	5.826	-2.133	1.00	21.70
	atom	442	O	LEU	57	17.808	5.188	-1.066	1.00	20.87
	atom	443	N	GLN	58	17.330	7.096	-2.189	1.00	19.73
	atom	444	CA	GLN	58	17.052	7.865	-0.998	1.00	16.37
	atom	445	CB	GLN	58	18.238	8.794	-0.706	1.00	17.68
	atom	446	CG	GLN	58	19.196	8.341	0.382	1.00	16.77
	atom	447	CD	GLN	58	20.265	9.384	0.663	1.00	17.60
	atom	448	OE1	GLN	58	20.630	10.161	-0.222	1.00	22.67
	atom	449	NE2	GLN	58	20.765	9.411	1.886	1.00	6.74
	atom	450	C	GLN	58	15.809	8.737	-1.143	1.00	18.67
	atom	451	O	GLN	58	15.699	9.514	-2.106	1.00	17.92
	atom	452	N	VAL	59	14.896	8.633	-0.177	1.00	15.93
	atom	453	CA	VAL	59	13.699	9.470	-0.149	1.00	14.47
	atom	454	CB	VAL	59	12.396	8.638	-0.063	1.00	18.72
	atom	455	CG1	VAL	59	11.300	9.328	-0.842	1.00	14.08

	atom	456	CG2	VAL	59	12.626	7.233	-0.593	1.00	22.38
	atom	457	C	VAL	59	13.867	10.306	1.121	1.00	12.11
	atom	458	O	VAL	59	13.722	9.815	2.226	1.00	10.88
	atom	459	N	LEU	60	14.204	11.573	0.957	1.00	14.53
	atom	460	CA	LEU	60	14.433	12.416	2.109	1.00	14.50
	atom	461	CB	LEU	60	15.529	13.430	1.800	1.00	12.39
	atom	462	CG	LEU	60	16.871	12.779	1.413	1.00	16.27
	atom	463	CD1	LEU	60	17.866	13.899	1.111	1.00	11.51
	atom	464	CD2	LEU	60	17.408	11.840	2.539	1.00	3.60
	atom	465	C	LEU	60	13.178	13.103	2.606	1.00	17.84
	atom	466	O	LEU	60	12.394	13.661	1.832	1.00	15.77
	atom	467	N	ASP	61	13.040	13.065	3.927	1.00	18.11
	atom	468	CA	ASP	61	11.909	13.593	4.677	1.00	18.66
	atom	469	CB	ASP	61	11.618	12.626	5.818	1.00	25.46
	atom	470	CG	ASP	61	10.326	11.963	5.651	1.00	33.26
	atom	471	OD1	ASP	61	9.757	12.139	4.544	1.00	34.36
	atom	472	OD2	ASP	61	9.891	11.290	6.606	1.00	35.67
	atom	473	C	ASP	61	11.986	14.982	5.305	1.00	10.57
	atom	474	O	ASP	61	13.030	15.608	5.344	1.00	12.55
	atom	475	N	ASP	62	10.846	15.414	5.837	1.00	8.70
	atom	476	CA	ASP	62	10.726	16.678	6.562	1.00	13.51
	atom	477	CB	ASP	62	9.252	16.995	6.815	1.00	19.98
	atom	478	CG	ASP	62	8.613	17.745	5.669	1.00	25.07
	atom	479	OD1	ASP	62	9.185	18.752	5.214	1.00	29.68
	atom	480	OD2	ASP	62	7.529	17.330	5.220	1.00	36.16
	atom	481	C	ASP	62	11.447	16.432	7.904	1.00	11.72
	atom	482	O	ASP	62	12.187	17.272	8.411	1.00	14.34
	atom	483	N	HIS	63	11.224	15.252	8.462	1.00	7.03
	atom	484	CA	HIS	63	11.880	14.852	9.682	1.00	8.14
	atom	485	CB	HIS	63	11.494	13.431	10.028	1.00	8.96
	atom	486	CG	HIS	63	10.125	13.316	10.597	1.00	9.90
	atom	487	CD2	HIS	63	9.186	12.348	10.485	1.00	10.14
	atom	488	ND1	HIS	63	9.583	14.290	11.410	1.00	13.24
	atom	489	CE1	HIS	63	8.368	13.923	11.776	1.00	12.69
	atom	490	NE2	HIS	63	8.104	12.749	11.228	1.00	13.44
	atom	491	C	HIS	63	13.379	14.944	9.458	1.00	11.07

	atom	492	O	HIS	63	14.117	15.383	10.330	1.00	17.19
	atom	493	N	TYR	64	13.826	14.553	8.271	1.00	11.50
	atom	494	CA	TYR	64	15.236	14.625	7.930	1.00	6.66
	atom	495	CB	TYR	64	15.483	13.814	6.656	1.00	8.87
	atom	496	CG	TYR	64	16.896	13.861	6.098	1.00	6.95
	atom	497	CD1	TYR	64	17.838	12.899	6.452	1.00	4.76
	atom	498	CE1	TYR	64	19.124	12.935	5.929	1.00	12.94
	atom	499	CD2	TYR	64	17.275	14.852	5.214	1.00	2.00
	atom	500	CE2	TYR	64	18.535	14.900	4.689	1.00	2.13
	atom	501	CZ	TYR	64	19.469	13.945	5.040	1.00	10.80
	atom	502	OH	TYR	64	20.740	14.003	4.506	1.00	12.42
	atom	503	C	TYR	64	15.731	16.079	7.756	1.00	9.32
	atom	504	O	TYR	64	16.821	16.409	8.183	1.00	10.40
	atom	505	N	ARG	65	14.945	16.951	7.132	1.00	11.85
	atom	506	CA	ARG	65	15.391	18.332	6.925	1.00	10.63
	atom	507	CB	ARG	65	14.529	19.039	5.863	1.00	11.62
	atom	508	CG	ARG	65	14.967	18.814	4.413	1.00	15.99
	atom	509	CD	ARG	65	13.803	18.999	3.431	1.00	10.97
	atom	510	NE	ARG	65	13.555	17.740	2.755	1.00	10.69
	atom	511	CZ	ARG	65	12.365	17.189	2.629	1.00	10.74
	atom	512	NH1	ARG	65	11.297	17.784	3.137	1.00	19.27
	atom	513	NH2	ARG	65	12.251	16.027	2.017	1.00	22.00
	atom	514	C	ARG	65	15.328	19.105	8.227	1.00	10.16
	atom	515	O	ARG	65	16.181	19.945	8.506	1.00	9.49
	atom	516	N	ASP	66	14.293	18.827	9.014	1.00	12.92
	atom	517	CA	ASP	66	14.117	19.461	10.317	1.00	12.66
	atom	518	CB	ASP	66	12.902	18.872	11.030	1.00	14.49
	atom	519	CG	ASP	66	11.577	19.287	10.391	1.00	16.83
	atom	520	OD1	ASP	66	11.534	20.244	9.588	1.00	23.29
	atom	521	OD2	ASP	66	10.567	18.641	10.700	1.00	21.75
	atom	522	C	ASP	66	15.354	19.208	11.166	1.00	12.55
	atom	523	O	ASP	66	15.929	20.130	11.739	1.00	18.23
	atom	524	N	VAL	67	15.768	17.948	11.242	1.00	13.56
	atom	525	CA	VAL	67	16.936	17.587	12.018	1.00	15.01
	atom	526	CB	VAL	67	17.089	16.053	12.113	1.00	15.24
	atom	527	CG1	VAL	67	18.435	15.699	12.744	1.00	12.81

	atom	528	CG2	VAL	67	15.949	15.475	12.938	1.00	14.85
	atom	529	C	VAL	67	18.209	18.194	11.453	1.00	16.66
	atom	530	O	VAL	67	19.085	18.619	12.197	1.00	20.19
	atom	531	N	LEU	68	18.315	18.231	10.131	1.00	19.36
	atom	532	CA	LEU	68	19.491	18.800	9.484	1.00	17.31
	atom	533	CB	LEU	68	19.343	18.701	7.976	1.00	17.07
	atom	534	CG	LEU	68	20.546	18.568	7.058	1.00	13.44
	atom	535	CD1	LEU	68	20.194	19.257	5.779	1.00	11.96
	atom	536	CD2	LEU	68	21.800	19.149	7.662	1.00	13.31
	atom	537	C	LEU	68	19.615	20.257	9.865	1.00	18.64
	atom	538	O	LEU	68	20.683	20.707	10.268	1.00	18.20
	atom	539	N	LYS	69	18.514	20.997	9.727	1.00	19.16
	atom	540	CA	LYS	69	18.515	22.425	10.046	1.00	21.81
	atom	541	CB	LYS	69	17.137	23.045	9.760	1.00	21.54
	atom	542	CG	LYS	69	17.041	24.542	10.027	1.00	29.64
	atom	543	CD	LYS	69	17.958	25.361	9.077	1.00	40.14
	atom	544	CE	LYS	69	18.430	26.692	9.700	1.00	41.31
	atom	545	NZ	LYS	69	19.745	26.583	10.435	1.00	39.47
	atom	546	C	LYS	69	18.922	22.675	11.506	1.00	21.75
	atom	547	O	LYS	69	19.690	23.599	11.789	1.00	19.83
	atom	548	N	GLU	70	18.413	21.862	12.432	1.00	19.44
	atom	549	CA	GLU	70	18.775	22.043	13.834	1.00	16.79
	atom	550	CB	GLU	70	18.028	21.030	14.725	1.00	17.97
	atom	551	CG	GLU	70	16.657	21.498	15.270	1.00	11.35
	atom	552	CD	GLU	70	15.761	20.321	15.694	1.00	17.47
	atom	553	OE1	GLU	70	14.529	20.344	15.445	1.00	16.54
	atom	554	OE2	GLU	70	16.290	19.354	16.277	1.00	20.49
	atom	555	C	GLU	70	20.295	21.852	13.955	1.00	15.13
	atom	556	O	GLU	70	20.987	22.614	14.638	1.00	12.95
	atom	557	N	MET	71	20.812	20.845	13.260	1.00	13.38
	atom	558	CA	MET	71	22.244	20.552	13.290	1.00	16.11
	atom	559	CB	MET	71	22.554	19.231	12.566	1.00	15.98
	atom	560	CG	MET	71	22.214	17.965	13.353	1.00	10.47
	atom	561	SD	MET	71	22.265	16.535	12.262	1.00	12.45
	atom	562	CE	MET	71	24.012	16.075	12.360	1.00	8.58
	atom	563	C	MET	71	23.079	21.665	12.672	1.00	17.09

	atom	564	O	MET	71	24.194	21.914	13.107	1.00	23.20
	atom	565	N	LYS	72	22.552	22.336	11.658	1.00	20.39
	atom	566	CA	LYS	72	23.312	23.415	11.031	1.00	23.32
	atom	567	CB	LYS	72	22.654	23.836	9.707	1.00	19.07
	atom	568	CG	LYS	72	22.582	22.691	8.697	1.00	24.91
	atom	569	CD	LYS	72	22.237	23.148	7.281	1.00	21.31
	atom	570	CE	LYS	72	22.873	22.216	6.253	1.00	28.04
	atom	571	NZ	LYS	72	22.258	22.305	4.877	1.00	23.48
	atom	572	C	LYS	72	23.392	24.599	11.996	1.00	23.98
	atom	573	O	LYS	72	24.402	25.289	12.081	1.00	23.75
	atom	574	N	ALA	73	22.321	24.809	12.747	1.00	22.15
	atom	575	CA	ALA	73	22.284	25.912	13.682	1.00	23.88
	atom	576	CB	ALA	73	20.883	26.036	14.267	1.00	18.45
	atom	577	C	ALA	73	23.331	25.759	14.793	1.00	26.36
	atom	578	O	ALA	73	23.865	26.748	15.288	1.00	26.34
	atom	579	N	LYS	74	23.621	24.520	15.185	1.00	28.33
	atom	580	CA	LYS	74	24.600	24.290	16.229	1.00	25.67
	atom	581	CB	LYS	74	24.430	22.893	16.847	1.00	25.92
	atom	582	CG	LYS	74	23.585	22.853	18.130	1.00	28.36
	atom	583	CD	LYS	74	24.265	23.552	19.334	1.00	30.79
	atom	584	CE	LYS	74	24.214	22.672	20.601	1.00	35.61
	atom	585	NZ	LYS	74	23.877	23.397	21.878	1.00	34.17
	atom	586	C	LYS	74	25.976	24.422	15.605	1.00	27.10
	atom	587	O	LYS	74	26.875	25.072	16.163	1.00	27.50
	atom	588	N	ALA	75	26.134	23.818	14.432	1.00	23.16
	atom	589	CA	ALA	75	27.413	23.855	13.743	1.00	20.98
	atom	590	CB	ALA	75	27.356	23.006	12.528	1.00	21.56
	atom	591	C	ALA	75	27.825	25.259	13.354	1.00	22.26
	atom	592	O	ALA	75	29.012	25.551	13.228	1.00	23.32
	atom	593	N	SER	76	26.838	26.125	13.162	1.00	24.92
	atom	594	CA	SER	76	27.089	27.493	12.760	1.00	26.73
	atom	595	CB	SER	76	25.822	28.104	12.176	1.00	27.52
	atom	596	OG	SER	76	25.129	28.863	13.148	1.00	28.21
	atom	597	C	SER	76	27.544	28.278	13.970	1.00	29.82
	atom	598	O	SER	76	27.689	29.500	13.927	1.00	30.87
	atom	599	N	THR	77	27.792	27.544	15.045	1.00	30.38

	atom	600	CA	THR	77	28.230	28.122	16.303	1.00	30.69
	atom	601	CB	THR	77	27.407	27.506	17.447	1.00	29.37
	atom	602	OG1	THR	77	26.562	28.519	17.994	1.00	29.19
	atom	603	CG2	THR	77	28.287	26.895	18.515	1.00	25.48
	atom	604	C	THR	77	29.724	27.848	16.478	1.00	29.58
	atom	605	O	THR	77	30.349	28.280	17.445	1.00	24.22
	atom	606	N	VAL	78	30.291	27.162	15.496	1.00	29.36
	atom	607	CA	VAL	78	31.696	26.788	15.526	1.00	29.59
	atom	608	CB	VAL	78	31.858	25.318	15.086	1.00	24.78
	atom	609	CG1	VAL	78	33.315	24.958	14.987	1.00	25.24
	atom	610	CG2	VAL	78	31.147	24.406	16.075	1.00	28.49
	atom	611	C	VAL	78	32.622	27.661	14.677	1.00	31.56
	atom	612	O	VAL	78	32.319	27.998	13.538	1.00	32.58
	atom	613	N	LYS	79	33.740	28.064	15.266	1.00	33.56
	atom	614	CA	LYS	79	34.735	28.828	14.542	1.00	34.79
	atom	615	CB	LYS	79	35.071	30.141	15.249	1.00	32.46
	atom	616	CG	LYS	79	36.249	30.895	14.608	1.00	33.23
	atom	617	CD	LYS	79	36.011	32.413	14.542	1.00	32.38
	atom	618	CE	LYS	79	37.336	33.181	14.512	1.00	31.25
	atom	619	NZ	LYS	79	37.146	34.664	14.694	1.00	28.15
	atom	620	C	LYS	79	35.944	27.899	14.546	1.00	35.40
	atom	621	O	LYS	79	36.478	27.569	15.597	1.00	39.82
	atom	622	N	ALA	80	36.333	27.439	13.368	1.00	33.45
	atom	623	CA	ALA	80	37.469	26.555	13.233	1.00	33.46
	atom	624	CB	ALA	80	37.030	25.236	12.605	1.00	35.50
	atom	625	C	ALA	80	38.493	27.264	12.350	1.00	33.42
	atom	626	O	ALA	80	38.176	28.234	11.663	1.00	31.55
	atom	627	N	LYS	81	39.727	26.793	12.364	1.00	34.22
	atom	628	CA	LYS	81	40.734	27.451	11.561	1.00	39.27
	atom	629	CB	LYS	81	41.549	28.395	12.458	1.00	45.20
	atom	630	CG	LYS	81	40.700	29.490	13.128	1.00	47.84
	atom	631	CD	LYS	81	41.194	30.898	12.794	1.00	52.73
	atom	632	CE	LYS	81	40.145	31.713	12.023	1.00	57.53
	atom	633	NZ	LYS	81	40.022	33.127	12.529	1.00	55.30
	atom	634	C	LYS	81	41.636	26.470	10.829	1.00	36.51
	atom	635	O	LYS	81	41.848	25.351	11.279	1.00	36.44

	atom	636	N	LEU	82	42.158	26.895	9.687	1.00	38.74
	atom	637	CA	LEU	82	43.031	26.032	8.900	1.00	40.54
	atom	638	CB	LEU	82	43.297	26.638	7.522	1.00	36.69
	atom	639	CG	LEU	82	43.881	28.041	7.530	1.00	39.86
	atom	640	CD1	LEU	82	45.399	27.960	7.486	1.00	40.59
	atom	641	CD2	LEU	82	43.346	28.818	6.325	1.00	41.39
	atom	642	C	LEU	82	44.334	25.849	9.637	1.00	39.91
	atom	643	O	LEU	82	44.931	26.811	10.088	1.00	44.32
	atom	644	N	LEU	83	44.768	24.606	9.767	1.00	41.24
	atom	645	CA	LEU	83	46.011	24.307	10.458	1.00	41.76
	atom	646	CB	LEU	83	45.989	22.870	10.967	1.00	45.45
	atom	647	CG	LEU	83	45.673	22.704	12.452	1.00	44.99
	atom	648	CD1	LEU	83	44.244	23.120	12.717	1.00	41.89
	atom	649	CD2	LEU	83	45.919	21.253	12.858	1.00	49.62
	atom	650	C	LEU	83	47.223	24.497	9.559	1.00	41.66
	atom	651	O	LEU	83	47.365	23.815	8.541	1.00	44.09
	atom	652	N	SER	84	48.101	25.416	9.938	1.00	39.54
	atom	653	CA	SER	84	49.309	25.671	9.160	1.00	41.17
	atom	654	CB	SER	84	50.289	26.524	9.948	1.00	40.14
	atom	655	OG	SER	84	51.211	25.672	10.594	1.00	44.38
	atom	656	C	SER	84	49.995	24.355	8.825	1.00	41.00
	atom	657	O	SER	84	49.895	23.391	9.581	1.00	43.11
	atom	658	N	VAL	85	50.696	24.337	7.692	1.00	40.40
	atom	659	CA	VAL	85	51.425	23.167	7.219	1.00	37.55
	atom	660	CB	VAL	85	52.506	23.561	6.201	1.00	38.24
	atom	661	CG1	VAL	85	52.583	22.516	5.083	1.00	29.36
	atom	662	CG2	VAL	85	52.234	24.962	5.687	1.00	33.82
	atom	663	C	VAL	85	52.133	22.425	8.335	1.00	36.97
	atom	664	O	VAL	85	51.864	21.252	8.583	1.00	34.50
	atom	665	N	GLU	86	53.065	23.127	8.972	1.00	40.58
	atom	666	CA	GLU	86	53.860	22.598	10.076	1.00	45.17
	atom	667	CB	GLU	86	54.494	23.764	10.851	1.00	48.61
	atom	668	CG	GLU	86	55.641	23.367	11.771	1.00	54.82
	atom	669	CD	GLU	86	56.222	24.555	12.532	1.00	58.91
	atom	670	OE1	GLU	86	56.363	25.647	11.929	1.00	58.31
	atom	671	OE2	GLU	86	56.535	24.393	13.733	1.00	56.74

	atom	672	C	GLU	86	53.020	21.736	11.024	1.00	43.55
	atom	673	O	GLU	86	53.332	20.559	11.253	1.00	44.27
	atom	674	N	GLU	87	51.957	22.328	11.567	1.00	40.10
	atom	675	CA	GLU	87	51.076	21.618	12.482	1.00	39.66
	atom	676	CB	GLU	87	49.936	22.525	12.959	1.00	41.94
	atom	677	CG	GLU	87	50.183	24.018	12.858	1.00	42.40
	atom	678	CD	GLU	87	49.129	24.806	13.617	1.00	45.98
	atom	679	OE1	GLU	87	49.021	24.596	14.846	1.00	49.50
	atom	680	OE2	GLU	87	48.408	25.626	12.996	1.00	44.29
	atom	681	C	GLU	87	50.478	20.400	11.798	1.00	38.83
	atom	682	O	GLU	87	50.348	19.330	12.399	1.00	39.83
	atom	683	N	ALA	88	50.103	20.580	10.536	1.00	37.26
	atom	684	CA	ALA	88	49.515	19.513	9.756	1.00	31.65
	atom	685	CB	ALA	88	49.183	20.022	8.366	1.00	37.48
	atom	686	C	ALA	88	50.479	18.341	9.683	1.00	30.57
	atom	687	O	ALA	88	50.097	17.197	9.932	1.00	28.38
	atom	688	N	CYS	89	51.734	18.623	9.346	1.00	32.91
	atom	689	CA	CYS	89	52.751	17.567	9.256	1.00	35.50
	atom	690	CB	CYS	89	54.088	18.132	8.760	1.00	36.77
	atom	691	SG	CYS	89	54.046	19.091	7.227	1.00	39.32
	atom	692	C	CYS	89	52.948	16.958	10.640	1.00	34.57
	atom	693	O	CYS	89	53.218	15.763	10.780	1.00	29.14
	atom	694	N	LYS	90	52.808	17.804	11.658	1.00	35.90
	atom	695	CA	LYS	90	52.948	17.387	13.046	1.00	35.21
	atom	696	CB	LYS	90	52.687	18.586	13.962	1.00	38.83
	atom	697	CG	LYS	90	53.876	19.542	14.115	1.00	38.07
	atom	698	CD	LYS	90	53.688	20.461	15.329	1.00	38.19
	atom	699	CE	LYS	90	53.841	21.942	14.959	1.00	37.14
	atom	700	NZ	LYS	90	54.543	22.741	16.014	1.00	35.41
	atom	701	C	LYS	90	51.991	16.231	13.384	1.00	33.34
	atom	702	O	LYS	90	52.428	15.191	13.878	1.00	33.62
	atom	703	N	LEU	91	50.699	16.397	13.099	1.00	29.63
	atom	704	CA	LEU	91	49.714	15.340	13.388	1.00	29.91
	atom	705	CB	LEU	91	48.273	15.868	13.196	1.00	28.22
	atom	706	CG	LEU	91	47.960	17.298	13.650	1.00	29.19
	atom	707	CD1	LEU	91	46.487	17.632	13.466	1.00	24.43

	atom	708	CD2	LEU	91	48.332	17.440	15.113	1.00	28.29
	atom	709	C	LEU	91	49.896	14.065	12.545	1.00	27.62
	atom	710	O	LEU	91	49.175	13.068	12.718	1.00	22.42
	atom	711	N	THR	92	50.869	14.082	11.643	1.00	27.24
	atom	712	CA	THR	92	51.070	12.926	10.783	1.00	26.76
	atom	713	CB	THR	92	51.681	13.329	9.439	1.00	26.41
	atom	714	OG1	THR	92	50.969	14.457	8.912	1.00	21.76
	atom	715	CG2	THR	92	51.611	12.161	8.458	1.00	18.31
	atom	716	C	THR	92	51.905	11.815	11.403	1.00	29.02
	atom	717	O	THR	92	53.041	12.028	11.828	1.00	26.24
	atom	718	N	PRO	93	51.342	10.598	11.443	1.00	28.01
	atom	719	CD	PRO	93	50.005	10.256	10.931	1.00	25.21
	atom	720	CA	PRO	93	52.034	9.451	12.018	1.00	29.87
	atom	721	CB	PRO	93	50.929	8.415	12.228	1.00	26.58
	atom	722	CG	PRO	93	49.832	8.811	11.311	1.00	25.50
	atom	723	C	PRO	93	53.153	8.935	11.151	1.00	37.17
	atom	724	O	PRO	93	53.043	8.920	9.927	1.00	41.58
	atom	725	N	PRO	94	54.260	8.511	11.783	1.00	42.61
	atom	726	CD	PRO	94	54.442	8.543	13.243	1.00	41.06
	atom	727	CA	PRO	94	55.445	7.976	11.104	1.00	44.30
	atom	728	CB	PRO	94	56.561	8.109	12.145	1.00	43.13
	atom	729	CG	PRO	94	55.916	8.721	13.382	1.00	41.35
	atom	730	C	PRO	94	55.214	6.531	10.701	1.00	48.81
	atom	731	O	PRO	94	56.131	5.709	10.709	1.00	52.50
	atom	732	N	HIS	95	53.969	6.230	10.359	1.00	52.35
	atom	733	CA	HIS	95	53.580	4.887	9.945	1.00	56.48
	atom	734	CB	HIS	95	52.771	4.210	11.062	1.00	62.31
	atom	735	CG	HIS	95	53.569	3.905	12.290	1.00	67.92
	atom	736	CD2	HIS	95	53.779	4.624	13.419	1.00	71.22
	atom	737	ND1	HIS	95	54.273	2.729	12.449	1.00	70.08
	atom	738	CE1	HIS	95	54.883	2.737	13.622	1.00	72.63
	atom	739	NE2	HIS	95	54.600	3.876	14.230	1.00	73.79
	atom	740	C	HIS	95	52.730	4.971	8.675	1.00	54.32
	atom	741	O	HIS	95	52.466	3.961	8.020	1.00	54.67
	atom	742	N	SER	96	52.310	6.189	8.341	1.00	52.67
	atom	743	CA	SER	96	51.478	6.436	7.167	1.00	51.55

	atom	744	CB	SER	96	51.206	7.935	7.024	1.00	48.39
	atom	745	OG	SER	96	49.834	8.222	7.223	1.00	49.92
	atom	746	C	SER	96	52.089	5.907	5.873	1.00	50.14
	atom	747	O	SER	96	53.307	5.753	5.762	1.00	48.81
	atom	748	N	ALA	97	51.225	5.622	4.903	1.00	48.74
	atom	749	CA	ALA	97	51.667	5.129	3.609	1.00	45.96
	atom	750	CB	ALA	97	50.463	4.736	2.764	1.00	44.05
	atom	751	C	ALA	97	52.426	6.287	2.967	1.00	44.12
	atom	752	O	ALA	97	51.956	7.426	2.988	1.00	42.50
	atom	753	N	LYS	98	53.599	6.008	2.408	1.00	43.16
	atom	754	CA	LYS	98	54.382	7.075	1.804	1.00	43.66
	atom	755	CB	LYS	98	55.784	6.591	1.416	1.00	46.98
	atom	756	CG	LYS	98	55.863	5.174	0.877	1.00	53.29
	atom	757	CD	LYS	98	57.249	4.895	0.273	1.00	56.52
	atom	758	CE	LYS	98	57.855	3.582	0.795	1.00	59.74
	atom	759	NZ	LYS	98	59.054	3.763	1.693	1.00	58.00
	atom	760	C	LYS	98	53.684	7.656	0.595	1.00	41.78
	atom	761	O	LYS	98	52.767	7.055	0.045	1.00	40.21
	atom	762	N	SER	99	54.115	8.845	0.203	1.00	40.17
	atom	763	CA	SER	99	53.541	9.533	-0.946	1.00	39.30
	atom	764	CB	SER	99	53.960	11.006	-0.930	1.00	37.16
	atom	765	OG	SER	99	53.585	11.665	-2.122	1.00	37.48
	atom	766	C	SER	99	54.021	8.876	-2.237	1.00	39.59
	atom	767	O	SER	99	55.134	8.340	-2.307	1.00	38.09
	atom	768	N	LYS	100	53.176	8.903	-3.258	1.00	39.09
	atom	769	CA	LYS	100	53.552	8.323	-4.537	1.00	39.07
	atom	770	CB	LYS	100	52.302	8.030	-5.379	1.00	38.76
	atom	771	CG	LYS	100	51.397	6.952	-4.783	1.00	39.32
	atom	772	CD	LYS	100	50.712	6.097	-5.844	1.00	38.73
	atom	773	CE	LYS	100	49.972	6.961	-6.866	1.00	42.51
	atom	774	NZ	LYS	100	48.477	6.848	-6.751	1.00	40.32
	atom	775	C	LYS	100	54.416	9.377	-5.213	1.00	37.59
	atom	776	O	LYS	100	54.706	9.302	-6.398	1.00	41.25
	atom	777	N	PHE	101	54.833	10.363	-4.437	1.00	37.93
	atom	778	CA	PHE	101	55.640	11.446	-4.965	1.00	37.18
	atom	779	CB	PHE	101	54.907	12.774	-4.769	1.00	38.29

	atom	780	CG	PHE	101	53.610	12.878	-5.534	1.00	41.38
	atom	781	CD1	PHE	101	52.407	12.477	-4.956	1.00	42.79
	atom	782	CD2	PHE	101	53.589	13.395	-6.826	1.00	44.38
	atom	783	CE1	PHE	101	51.201	12.594	-5.651	1.00	40.64
	atom	784	CE2	PHE	101	52.385	13.516	-7.528	1.00	46.23
	atom	785	CZ	PHE	101	51.191	13.110	-6.932	1.00	43.69
	atom	786	C	PHE	101	57.040	11.549	-4.371	1.00	35.95
	atom	787	O	PHE	101	57.583	12.644	-4.267	1.00	36.66
	atom	788	N	GLY	102	57.626	10.428	-3.970	1.00	33.18
	atom	789	CA	GLY	102	58.980	10.486	-3.445	1.00	38.51
	atom	790	C	GLY	102	59.190	10.645	-1.948	1.00	40.60
	atom	791	O	GLY	102	59.980	9.908	-1.357	1.00	44.00
	atom	792	N	TYR	103	58.500	11.600	-1.330	1.00	39.47
	atom	793	CA	TYR	103	58.637	11.839	0.099	1.00	36.19
	atom	794	CB	TYR	103	58.399	13.322	0.409	1.00	38.66
	atom	795	CG	TYR	103	56.975	13.774	0.179	1.00	43.42
	atom	796	CD1	TYR	103	56.097	13.954	1.250	1.00	43.70
	atom	797	CE1	TYR	103	54.776	14.327	1.040	1.00	40.87
	atom	798	CD2	TYR	103	56.490	13.988	-1.113	1.00	42.01
	atom	799	CE2	TYR	103	55.167	14.362	-1.330	1.00	41.58
	atom	800	CZ	TYR	103	54.319	14.523	-0.249	1.00	41.66
	atom	801	OH	TYR	103	53.002	14.834	-0.463	1.00	40.71
	atom	802	C	TYR	103	57.683	10.983	0.927	1.00	33.83
	atom	803	O	TYR	103	56.526	10.805	0.564	1.00	30.73
	atom	804	N	GLY	104	58.181	10.472	2.053	1.00	32.59
	atom	805	CA	GLY	104	57.375	9.644	2.934	1.00	28.17
	atom	806	C	GLY	104	56.980	10.361	4.217	1.00	27.26
	atom	807	O	GLY	104	57.122	11.587	4.317	1.00	26.17
	atom	808	N	ALA	105	56.506	9.590	5.200	1.00	25.91
	atom	809	CA	ALA	105	56.049	10.115	6.494	1.00	25.21
	atom	810	CB	ALA	105	55.611	8.958	7.398	1.00	27.81
	atom	811	C	ALA	105	57.059	10.984	7.229	1.00	26.29
	atom	812	O	ALA	105	56.736	12.088	7.624	1.00	26.09
	atom	813	N	LYS	106	58.279	10.485	7.414	1.00	30.88
	atom	814	CA	LYS	106	59.328	11.230	8.106	1.00	33.21
	atom	815	CB	LYS	106	60.651	10.471	8.046	1.00	35.15

	atom	816	CG	LYS	106	60.648	9.084	8.652	1.00	35.21
	atom	817	CD	LYS	106	62.020	8.414	8.473	1.00	37.97
	atom	818	CE	LYS	106	63.165	9.247	9.084	1.00	40.55
	atom	819	NZ	LYS	106	63.795	10.224	8.120	1.00	42.09
	atom	820	C	LYS	106	59.540	12.626	7.499	1.00	37.89
	atom	821	O	LYS	106	59.392	13.647	8.187	1.00	41.12
	atom	822	N	ASP	107	59.890	12.671	6.215	1.00	37.54
	atom	823	CA	ASP	107	60.111	13.951	5.550	1.00	36.88
	atom	824	CB	ASP	107	60.319	13.755	4.051	1.00	38.32
	atom	825	CG	ASP	107	61.336	12.710	3.752	1.00	38.12
	atom	826	OD1	ASP	107	60.928	11.546	3.561	1.00	43.45
	atom	827	OD2	ASP	107	62.538	13.051	3.725	1.00	37.45
	atom	828	C	ASP	107	58.924	14.863	5.772	1.00	36.64
	atom	829	O	ASP	107	59.079	16.085	5.791	1.00	36.99
	atom	830	N	VAL	108	57.742	14.269	5.934	1.00	36.35
	atom	831	CA	VAL	108	56.540	15.054	6.176	1.00	37.31
	atom	832	CB	VAL	108	55.246	14.224	6.187	1.00	36.25
	atom	833	CG1	VAL	108	54.088	15.120	6.645	1.00	34.33
	atom	834	CG2	VAL	108	54.964	13.642	4.804	1.00	34.75
	atom	835	C	VAL	108	56.648	15.677	7.546	1.00	39.35
	atom	836	O	VAL	108	56.160	16.786	7.762	1.00	40.52
	atom	837	N	ARG	109	57.276	14.972	8.481	1.00	38.92
	atom	838	CA	ARG	109	57.400	15.538	9.812	1.00	42.93
	atom	839	CB	ARG	109	57.512	14.450	10.882	1.00	43.03
	atom	840	CG	ARG	109	57.133	15.009	12.258	1.00	44.53
	atom	841	CD	ARG	109	57.316	14.020	13.391	1.00	43.36
	atom	842	NE	ARG	109	56.054	13.407	13.796	1.00	38.77
	atom	843	CZ	ARG	109	55.639	12.230	13.346	1.00	41.28
	atom	844	NH1	ARG	109	56.391	11.550	12.480	1.00	41.93
	atom	845	NH2	ARG	109	54.484	11.725	13.758	1.00	38.65
	atom	846	C	ARG	109	58.572	16.504	9.947	1.00	42.11
	atom	847	O	ARG	109	58.494	17.476	10.701	1.00	43.02
	atom	848	N	ASN	110	59.643	16.258	9.203	1.00	40.35
	atom	849	CA	ASN	110	60.814	17.121	9.287	1.00	39.21
	atom	850	CB	ASN	110	62.035	16.428	8.688	1.00	38.45
	atom	851	CG	ASN	110	62.295	15.072	9.301	1.00	39.25

	atom	852	OD1	ASN	110	61.557	14.608	10.177	1.00	37.94
	atom	853	ND2	ASN	110	63.354	14.417	8.837	1.00	44.86
	atom	854	C	ASN	110	60.622	18.458	8.594	1.00	38.41
	atom	855	O	ASN	110	61.430	19.374	8.773	1.00	38.56
	atom	856	N	LEU	111	59.559	18.572	7.808	1.00	38.57
	atom	857	CA	LEU	111	59.282	19.806	7.065	1.00	39.58
	atom	858	CB	LEU	111	59.388	21.026	8.008	1.00	42.47
	atom	859	CG	LEU	111	58.147	21.467	8.812	1.00	43.38
	atom	860	CD1	LEU	111	58.187	22.978	9.027	1.00	41.87
	atom	861	CD2	LEU	111	56.857	21.078	8.070	1.00	42.61
	atom	862	C	LEU	111	60.254	19.954	5.873	1.00	35.49
	atom	863	O	LEU	111	60.762	21.038	5.613	1.00	32.32
	atom	864	N	SER	112	60.484	18.851	5.155	1.00	35.47
	atom	865	CA	SER	112	61.388	18.802	3.995	1.00	36.76
	atom	866	CB	SER	112	61.665	17.349	3.614	1.00	33.80
	atom	867	OG	SER	112	61.846	16.538	4.768	1.00	41.08
	atom	868	C	SER	112	60.893	19.544	2.748	1.00	39.87
	atom	869	O	SER	112	59.684	19.622	2.495	1.00	41.50
	atom	870	N	SER	113	61.830	20.076	1.960	1.00	40.26
	atom	871	CA	SER	113	61.461	20.803	0.745	1.00	40.14
	atom	872	CB	SER	113	62.717	21.333	0.007	1.00	36.91
	atom	873	OG	SER	113	63.547	20.294	-0.493	1.00	34.84
	atom	874	C	SER	113	60.603	19.942	-0.199	1.00	39.35
	atom	875	O	SER	113	59.630	20.434	-0.778	1.00	35.31
	atom	876	N	LYS	114	60.934	18.661	-0.345	1.00	36.58
	atom	877	CA	LYS	114	60.132	17.842	-1.246	1.00	36.80
	atom	878	CB	LYS	114	60.799	16.478	-1.517	1.00	38.93
	atom	879	CG	LYS	114	61.008	15.591	-0.301	1.00	42.06
	atom	880	CD	LYS	114	62.259	14.708	-0.468	1.00	43.98
	atom	881	CE	LYS	114	61.922	13.218	-0.479	1.00	44.48
	atom	882	NZ	LYS	114	61.151	12.815	-1.706	1.00	45.74
	atom	883	C	LYS	114	58.741	17.660	-0.660	1.00	32.52
	atom	884	O	LYS	114	57.745	17.674	-1.383	1.00	29.98
	atom	885	N	ALA	115	58.673	17.519	0.657	1.00	30.18
	atom	886	CA	ALA	115	57.390	17.332	1.315	1.00	27.13
	atom	887	CB	ALA	115	57.604	16.823	2.722	1.00	29.85

	atom	888	C	ALA	115	56.549	18.599	1.336	1.00	25.43
	atom	889	O	ALA	115	55.520	18.678	0.675	1.00	25.39
	atom	890	N	VAL	116	56.983	19.604	2.079	1.00	25.70
	atom	891	CA	VAL	116	56.191	20.818	2.159	1.00	29.81
5	atom	892	CB	VAL	116	56.788	21.843	3.185	1.00	33.13
	atom	893	CG1	VAL	116	57.706	21.132	4.183	1.00	31.17
	atom	894	CG2	VAL	116	57.505	22.968	2.458	1.00	32.30
	atom	895	C	VAL	116	55.968	21.499	0.816	1.00	30.35
	atom	896	O	VAL	116	55.115	22.386	0.691	1.00	30.89
10	atom	897	N	ASN	117	56.733	21.091	-0.194	1.00	34.04
	atom	898	CA	ASN	117	56.575	21.661	-1.527	1.00	29.24
	atom	899	CB	ASN	117	57.837	21.494	-2.339	1.00	29.74
	atom	900	CG	ASN	117	58.729	22.700	-2.237	1.00	33.98
	atom	901	OD1	ASN	117	58.249	23.814	-2.008	1.00	32.74
15	atom	902	ND2	ASN	117	60.034	22.494	-2.396	1.00	33.91
	atom	903	C	ASN	117	55.417	20.974	-2.218	1.00	31.35
	atom	904	O	ASN	117	54.549	21.646	-2.797	1.00	32.64
	atom	905	N	HIS	118	55.386	19.641	-2.161	1.00	29.08
	atom	906	CA	HIS	118	54.271	18.936	-2.769	1.00	29.87
20	atom	907	CB	HIS	118	54.421	17.422	-2.661	1.00	30.84
	atom	908	CG	HIS	118	53.366	16.670	-3.415	1.00	33.81
	atom	909	CD2	HIS	118	53.234	16.404	-4.738	1.00	35.27
	atom	910	ND1	HIS	118	52.259	16.120	-2.804	1.00	35.85
	atom	911	CE1	HIS	118	51.492	15.548	-3.717	1.00	34.79
25	atom	912	NE2	HIS	118	52.061	15.707	-4.899	1.00	34.99
	atom	913	C	HIS	118	52.992	19.362	-2.052	1.00	29.49
	atom	914	O	HIS	118	51.998	19.707	-2.705	1.00	28.83
	atom	915	N	ILE	119	53.023	19.356	-0.714	1.00	26.81
	atom	916	CA	ILE	119	51.848	19.742	0.071	1.00	23.40
30	atom	917	CB	ILE	119	52.135	19.904	1.616	1.00	23.43
	atom	918	CG2	ILE	119	50.807	20.061	2.350	1.00	18.95
	atom	919	CG1	ILE	119	52.949	18.733	2.195	1.00	17.13
	atom	920	CD1	ILE	119	52.724	17.410	1.528	1.00	16.75
	atom	921	C	ILE	119	51.307	21.087	-0.418	1.00	25.01
35	atom	922	O	ILE	119	50.099	21.236	-0.619	1.00	27.46
	atom	923	N	HIS	120	52.190	22.064	-0.609	1.00	23.34

	atom	924	CA	HIS	120	51.759	23.393	-1.056	1.00	27.79
	atom	925	CB	HIS	120	52.927	24.394	-1.041	1.00	29.17
	atom	926	CG	HIS	120	53.046	25.181	0.233	1.00	33.05
	atom	927	CD2	HIS	120	52.287	26.186	0.737	1.00	34.23
	atom	928	ND1	HIS	120	54.082	25.001	1.127	1.00	30.81
	atom	929	CE1	HIS	120	53.957	25.864	2.121	1.00	34.45
	atom	930	NE2	HIS	120	52.877	26.595	1.908	1.00	31.69
	atom	931	C	HIS	120	51.192	23.322	-2.459	1.00	27.87
	atom	932	O	HIS	120	50.469	24.218	-2.898	1.00	28.92
	atom	933	N	SER	121	51.523	22.243	-3.155	1.00	27.69
	atom	934	CA	SER	121	51.070	22.053	-4.514	1.00	27.83
	atom	935	CB	SER	121	52.015	21.106	-5.237	1.00	27.86
	atom	936	OG	SER	121	51.674	19.771	-4.963	1.00	37.11
	atom	937	C	SER	121	49.647	21.516	-4.528	1.00	28.37
	atom	938	O	SER	121	48.777	22.059	-5.225	1.00	26.86
	atom	939	N	VAL	122	49.412	20.451	-3.761	1.00	24.36
	atom	940	CA	VAL	122	48.082	19.862	-3.662	1.00	18.71
	atom	941	CB	VAL	122	48.022	18.835	-2.547	1.00	17.51
	atom	942	CG1	VAL	122	46.715	18.110	-2.593	1.00	18.55
	atom	943	CG2	VAL	122	49.177	17.873	-2.664	1.00	13.33
	atom	944	C	VAL	122	47.124	20.986	-3.294	1.00	23.53
	atom	945	O	VAL	122	46.061	21.153	-3.900	1.00	26.85
	atom	946	N	TRP	123	47.529	21.766	-2.297	1.00	23.06
	atom	947	CA	TRP	123	46.739	22.884	-1.816	1.00	23.55
	atom	948	CB	TRP	123	47.471	23.556	-0.653	1.00	21.89
	atom	949	CG	TRP	123	46.627	24.532	0.078	1.00	25.42
	atom	950	CD2	TRP	123	45.645	24.240	1.083	1.00	26.38
	atom	951	CE2	TRP	123	45.093	25.475	1.499	1.00	28.91
	atom	952	CE3	TRP	123	45.177	23.058	1.676	1.00	24.29
	atom	953	CD1	TRP	123	46.627	25.889	-0.074	1.00	26.95
	atom	954	NE1	TRP	123	45.712	26.465	0.777	1.00	27.44
	atom	955	CZ2	TRP	123	44.092	25.559	2.481	1.00	26.73
	atom	956	CZ3	TRP	123	44.179	23.145	2.656	1.00	21.17
	atom	957	CH2	TRP	123	43.652	24.384	3.043	1.00	22.82
	atom	958	C	TRP	123	46.446	23.913	-2.911	1.00	26.85
	atom	959	O	TRP	123	45.285	24.316	-3.133	1.00	25.72

	atom	960	N	LYS	124	47.503	24.353	-3.585	1.00	27.17
	atom	961	CA	LYS	124	47.348	25.329	-4.642	1.00	28.06
	atom	962	CB	LYS	124	48.705	25.608	-5.288	1.00	33.88
	atom	963	CG	LYS	124	49.060	27.080	-5.403	1.00	40.73
	atom	964	CD	LYS	124	49.541	27.438	-6.809	1.00	41.38
	atom	965	CE	LYS	124	48.827	28.674	-7.354	1.00	46.41
	atom	966	NZ	LYS	124	47.499	28.923	-6.704	1.00	49.07
	atom	967	C	LYS	124	46.369	24.742	-5.666	1.00	30.15
	atom	968	O	LYS	124	45.493	25.439	-6.180	1.00	31.90
	atom	969	N	ASP	125	46.510	23.449	-5.941	1.00	25.74
	atom	970	CA	ASP	125	45.644	22.776	-6.890	1.00	26.60
	atom	971	CB	ASP	125	46.243	21.426	-7.267	1.00	27.99
	atom	972	CG	ASP	125	45.387	20.680	-8.246	1.00	30.71
	atom	973	OD1	ASP	125	44.730	19.698	-7.841	1.00	30.95
	atom	974	OD2	ASP	125	45.367	21.086	-9.426	1.00	34.01
	atom	975	C	ASP	125	44.223	22.579	-6.348	1.00	27.76
	atom	976	O	ASP	125	43.251	22.750	-7.078	1.00	24.76
	atom	977	N	LEU	126	44.112	22.202	-5.072	1.00	28.72
	atom	978	CA	LEU	126	42.810	22.005	-4.428	1.00	27.55
	atom	979	CB	LEU	126	42.987	21.653	-2.946	1.00	32.08
	atom	980	CG	LEU	126	42.677	20.256	-2.378	1.00	31.18
	atom	981	CD1	LEU	126	42.843	19.205	-3.443	1.00	30.39
	atom	982	CD2	LEU	126	43.621	19.959	-1.202	1.00	27.49
	atom	983	C	LEU	126	42.034	23.301	-4.546	1.00	28.36
	atom	984	O	LEU	126	40.820	23.295	-4.720	1.00	30.62
	atom	985	N	LEU	127	42.734	24.425	-4.451	1.00	31.72
	atom	986	CA	LEU	127	42.067	25.723	-4.582	1.00	32.79
	atom	987	CB	LEU	127	42.910	26.845	-3.961	1.00	32.10
	atom	988	CG	LEU	127	42.549	27.340	-2.552	1.00	30.91
	atom	989	CD1	LEU	127	43.818	27.565	-1.771	1.00	30.11
	atom	990	CD2	LEU	127	41.751	28.632	-2.618	1.00	31.55
	atom	991	C	LEU	127	41.799	26.050	-6.052	1.00	33.49
	atom	992	O	LEU	127	40.743	26.578	-6.385	1.00	34.00
	atom	993	N	GLU	128	42.741	25.712	-6.928	1.00	36.34
	atom	994	CA	GLU	128	42.606	26.005	-8.361	1.00	41.24
	atom	995	CB	GLU	128	43.955	25.825	-9.061	1.00	43.95

	atom	996	CG	GLU	128	45.044	26.774	-8.577	1.00	47.28
	atom	997	CD	GLU	128	46.333	26.649	-9.378	1.00	48.55
	atom	998	OE1	GLU	128	47.026	25.610	-9.257	1.00	39.81
	atom	999	OE2	GLU	128	46.645	27.599	-10.132	1.00	52.61
	atom	1000	C	GLU	128	41.558	25.179	-9.111	1.00	42.51
	atom	1001	O	GLU	128	40.787	25.719	-9.915	1.00	42.88
	atom	1002	N	ASP	129	41.547	23.872	-8.861	1.00	41.24
	atom	1003	CA	ASP	129	40.614	22.960	-9.516	1.00	40.24
	atom	1004	CB	ASP	129	41.412	21.827	-10.184	1.00	36.27
	atom	1005	CG	ASP	129	40.530	20.696	-10.700	1.00	36.04
	atom	1006	OD1	ASP	129	41.078	19.685	-11.190	1.00	32.77
	atom	1007	OD2	ASP	129	39.294	20.810	-10.613	1.00	32.84
	atom	1008	C	ASP	129	39.609	22.409	-8.494	1.00	41.19
	atom	1009	O	ASP	129	39.989	22.001	-7.395	1.00	46.03
	atom	1010	N	THR	130	38.329	22.398	-8.856	1.00	38.31
	atom	1011	CA	THR	130	37.288	21.904	-7.957	1.00	34.89
	atom	1012	CB	THR	130	36.400	23.052	-7.465	1.00	33.83
	atom	1013	OG1	THR	130	37.102	24.292	-7.608	1.00	40.00
	atom	1014	CG2	THR	130	36.053	22.847	-6.011	1.00	39.94
	atom	1015	C	THR	130	36.378	20.844	-8.572	1.00	29.81
	atom	1016	O	THR	130	35.248	20.644	-8.119	1.00	27.61
	atom	1017	N	VAL	131	36.872	20.151	-9.587	1.00	25.63
	atom	1018	CA	VAL	131	36.072	19.133	-10.247	1.00	24.40
	atom	1019	CB	VAL	131	35.440	19.670	-11.571	1.00	23.85
	atom	1020	CG1	VAL	131	34.345	20.668	-11.278	1.00	19.16
	atom	1021	CG2	VAL	131	36.515	20.303	-12.439	1.00	22.84
	atom	1022	C	VAL	131	36.836	17.870	-10.613	1.00	24.65
	atom	1023	O	VAL	131	36.248	16.792	-10.700	1.00	28.73
	atom	1024	N	THR	132	38.135	17.975	-10.832	1.00	23.01
	atom	1025	CA	THR	132	38.844	16.783	-11.253	1.00	27.63
	atom	1026	CB	THR	132	40.287	17.085	-11.760	1.00	27.72
	atom	1027	OG1	THR	132	40.223	17.982	-12.873	1.00	30.46
	atom	1028	CG2	THR	132	40.984	15.788	-12.209	1.00	21.31
	atom	1029	C	THR	132	38.927	15.708	-10.193	1.00	26.62
	atom	1030	O	THR	132	39.520	15.895	-9.145	1.00	22.23
	atom	1031	N	PRO	133	38.316	14.553	-10.463	1.00	26.51

	atom	1032	CD	PRO	133	37.540	14.190	-11.659	1.00	26.31
	atom	1033	CA	PRO	133	38.367	13.468	-9.486	1.00	25.60
	atom	1034	CB	PRO	133	37.913	12.260	-10.283	1.00	22.89
	atom	1035	CG	PRO	133	37.017	12.828	-11.320	1.00	25.09
	atom	1036	C	PRO	133	39.799	13.308	-8.984	1.00	24.24
	atom	1037	O	PRO	133	40.750	13.529	-9.728	1.00	20.29
	atom	1038	N	ILE	134	39.960	12.967	-7.707	1.00	23.20
	atom	1039	CA	ILE	134	41.303	12.768	-7.194	1.00	18.95
	atom	1040	CB	ILE	134	41.571	13.528	-5.929	1.00	15.58
	atom	1041	CG2	ILE	134	43.061	13.535	-5.672	1.00	18.69
	atom	1042	CG1	ILE	134	41.068	14.961	-6.082	1.00	19.26
	atom	1043	CD1	ILE	134	41.500	15.900	-4.981	1.00	22.01
	atom	1044	C	ILE	134	41.515	11.312	-6.947	1.00	18.69
	atom	1045	O	ILE	134	40.643	10.620	-6.431	1.00	20.23
	atom	1046	N	ASP	135	42.687	10.840	-7.348	1.00	21.07
	atom	1047	CA	ASP	135	43.006	9.435	-7.201	1.00	20.01
	atom	1048	CB	ASP	135	44.375	9.143	-7.819	1.00	16.94
	atom	1049	CG	ASP	135	44.611	7.659	-8.022	1.00	21.36
	atom	1050	OD1	ASP	135	45.672	7.156	-7.591	1.00	23.85
	atom	1051	OD2	ASP	135	43.731	6.990	-8.608	1.00	22.71
	atom	1052	C	ASP	135	42.988	8.959	-5.748	1.00	20.02
	atom	1053	O	ASP	135	43.245	9.723	-4.804	1.00	13.99
	atom	1054	N	THR	136	42.660	7.686	-5.594	1.00	18.67
	atom	1055	CA	THR	136	42.654	7.038	-4.304	1.00	19.75
	atom	1056	CB	THR	136	41.232	6.888	-3.744	1.00	17.02
	atom	1057	OG1	THR	136	40.498	5.971	-4.555	1.00	9.30
	atom	1058	CG2	THR	136	40.516	8.226	-3.708	1.00	17.58
	atom	1059	C	THR	136	43.241	5.648	-4.564	1.00	24.20
	atom	1060	O	THR	136	43.266	5.179	-5.708	1.00	22.78
	atom	1061	N	THR	137	43.736	5.003	-3.512	1.00	24.03
	atom	1062	CA	THR	137	44.283	3.668	-3.637	1.00	24.60
	atom	1063	CB	THR	137	45.672	3.564	-2.987	1.00	28.29
	atom	1064	OG1	THR	137	46.600	4.388	-3.707	1.00	30.23
	atom	1065	CG2	THR	137	46.151	2.107	-2.986	1.00	19.96
	atom	1066	C	THR	137	43.319	2.775	-2.890	1.00	27.53
	atom	1067	O	THR	137	42.616	3.236	-1.995	1.00	30.77

	atom	1068	N	ILE	138	43.270	1.504	-3.247	1.00	27.92
	atom	1069	CA	ILE	138	42.365	0.587	-2.572	1.00	29.07
	atom	1070	CB	ILE	138	41.183	0.247	-3.504	1.00	29.08
	atom	1071	CG2	ILE	138	41.690	-0.519	-4.734	1.00	33.44
	atom	1072	CG1	ILE	138	40.140	-0.582	-2.761	1.00	28.14
	atom	1073	CD1	ILE	138	39.027	-1.083	-3.653	1.00	20.51
	atom	1074	C	ILE	138	43.121	-0.688	-2.186	1.00	30.56
	atom	1075	O	ILE	138	43.909	-1.207	-2.978	1.00	30.47
	atom	1076	N	MET	139	42.896	-1.185	-0.969	1.00	31.87
	atom	1077	CA	MET	139	43.567	-2.406	-0.503	1.00	27.79
	atom	1078	CB	MET	139	44.806	-2.086	0.346	1.00	28.63
	atom	1079	CG	MET	139	45.638	-0.919	-0.103	1.00	30.54
	atom	1080	SD	MET	139	46.954	-1.399	-1.229	1.00	35.25
	atom	1081	CE	MET	139	47.637	-2.869	-0.399	1.00	32.65
	atom	1082	C	MET	139	42.670	-3.292	0.340	1.00	27.25
	atom	1083	O	MET	139	41.642	-2.855	0.857	1.00	26.02
	atom	1084	N	ALA	140	43.089	-4.545	0.473	1.00	27.55
	atom	1085	CA	ALA	140	42.397	-5.528	1.283	1.00	30.30
	atom	1086	CB	ALA	140	42.555	-6.900	0.675	1.00	35.07
	atom	1087	C	ALA	140	43.094	-5.475	2.632	1.00	32.97
	atom	1088	O	ALA	140	44.266	-5.822	2.727	1.00	34.38
	atom	1089	N	LYS	141	42.385	-5.030	3.670	1.00	35.27
	atom	1090	CA	LYS	141	42.977	-4.923	5.003	1.00	33.15
	atom	1091	CB	LYS	141	42.006	-4.218	5.966	1.00	35.10
	atom	1092	CG	LYS	141	42.350	-2.749	6.253	1.00	35.84
	atom	1093	CD	LYS	141	41.654	-2.253	7.527	1.00	45.78
	atom	1094	CE	LYS	141	41.296	-0.750	7.480	1.00	46.95
	atom	1095	NZ	LYS	141	42.250	0.125	8.262	1.00	40.65
	atom	1096	C	LYS	141	43.378	-6.280	5.572	1.00	30.45
	atom	1097	O	LYS	141	42.764	-7.300	5.271	1.00	30.72
	atom	1098	N	ASN	142	44.427	-6.286	6.387	1.00	31.80
	atom	1099	CA	ASN	142	44.901	-7.518	7.014	1.00	30.98
	atom	1100	CB	ASN	142	46.374	-7.767	6.682	1.00	34.24
	atom	1101	CG	ASN	142	46.612	-8.074	5.208	1.00	35.52
	atom	1102	OD1	ASN	142	47.485	-8.865	4.868	1.00	39.27
	atom	1103	ND2	ASN	142	45.844	-7.447	4.333	1.00	38.53

	atom	1104	C	ASN	142	44.762	-7.412	8.532	1.00	29.48
	atom	1105	O	ASN	142	45.608	-6.799	9.188	1.00	29.84
	atom	1106	N	GLU	143	43.691	-7.974	9.089	1.00	24.53
	atom	1107	CA	GLU	143	43.502	-7.959	10.539	1.00	21.38
	atom	1108	CB	GLU	143	42.424	-6.964	10.976	1.00	18.52
	atom	1109	CG	GLU	143	41.157	-6.959	10.200	1.00	18.79
	atom	1110	CD	GLU	143	40.498	-5.598	10.225	1.00	24.58
	atom	1111	OE1	GLU	143	41.221	-4.583	10.337	1.00	26.71
	atom	1112	OE2	GLU	143	39.256	-5.534	10.134	1.00	30.37
	atom	1113	C	GLU	143	43.127	-9.370	10.916	1.00	17.67
	atom	1114	O	GLU	143	42.601	-10.100	10.094	1.00	18.42
	atom	1115	N	VAL	144	43.402	-9.780	12.141	1.00	18.08
	atom	1116	CA	VAL	144	43.108	-11.160	12.489	1.00	20.34
	atom	1117	CB	VAL	144	44.311	-11.808	13.234	1.00	19.69
	atom	1118	CG1	VAL	144	45.473	-10.836	13.272	1.00	16.08
	atom	1119	CG2	VAL	144	43.915	-12.248	14.622	1.00	17.22
	atom	1120	C	VAL	144	41.814	-11.386	13.249	1.00	20.20
	atom	1121	O	VAL	144	41.335	-10.519	13.953	1.00	24.17
	atom	1122	N	PHE	145	41.261	-12.578	13.079	1.00	19.44
	atom	1123	CA	PHE	145	40.009	-12.977	13.695	1.00	16.92
	atom	1124	CB	PHE	145	38.859	-12.806	12.685	1.00	13.45
	atom	1125	CG	PHE	145	38.581	-11.388	12.312	1.00	15.25
	atom	1126	CD1	PHE	145	38.830	-10.931	11.007	1.00	15.94
	atom	1127	CD2	PHE	145	38.102	-10.490	13.255	1.00	13.17
	atom	1128	CE1	PHE	145	38.601	-9.596	10.649	1.00	10.23
	atom	1129	CE2	PHE	145	37.869	-9.138	12.906	1.00	14.24
	atom	1130	CZ	PHE	145	38.126	-8.697	11.597	1.00	11.75
	atom	1131	C	PHE	145	40.080	-14.450	14.094	1.00	17.27
	atom	1132	O	PHE	145	41.119	-15.102	13.979	1.00	19.33
	atom	1133	N	CYS	146	38.954	-14.970	14.550	1.00	16.56
	atom	1134	CA	CYS	146	38.851	-16.362	14.921	1.00	20.74
	atom	1135	CB	CYS	146	38.298	-16.497	16.343	1.00	21.33
	atom	1136	SG	CYS	146	38.327	-18.171	16.982	1.00	29.82
	atom	1137	C	CYS	146	37.848	-16.890	13.915	1.00	23.25
	atom	1138	O	CYS	146	36.891	-16.192	13.591	1.00	25.02
	atom	1139	N	VAL	147	38.052	-18.099	13.410	1.00	27.48

atom	1140	CA	VAL	147	37.119	-18.630	12.430	1.00	38.58
atom	1141	CB	VAL	147	37.508	-20.048	11.989	1.00	39.88
atom	1142	CG1	VAL	147	39.016	-20.124	11.801	1.00	38.82
atom	1143	CG2	VAL	147	37.016	-21.070	13.008	1.00	39.16
atom	1144	C	VAL	147	35.703	-18.626	12.988	1.00	42.08
atom	1145	O	VAL	147	35.496	-18.919	14.163	1.00	42.99
atom	1146	N	GLN	148	34.747	-18.271	12.128	1.00	51.56
atom	1147	CA	GLN	148	33.334	-18.178	12.490	1.00	57.47
atom	1148	CB	GLN	148	32.435	-18.268	11.250	1.00	62.42
atom	1149	CG	GLN	148	31.133	-17.442	11.348	1.00	70.40
atom	1150	CD	GLN	148	30.655	-16.892	9.995	1.00	73.15
atom	1151	OE1	GLN	148	30.954	-15.751	9.633	1.00	73.18
atom	1152	NE2	GLN	148	29.909	-17.708	9.250	1.00	73.56
atom	1153	C	GLN	148	32.978	-19.281	13.455	1.00	59.27
atom	1154	O	GLN	148	33.357	-20.438	13.257	1.00	58.76
atom	1155	N	PRO	149	32.240	-18.929	14.520	1.00	60.36
atom	1156	CD	PRO	149	31.737	-17.567	14.770	1.00	60.19
atom	1157	CA	PRO	149	31.801	-19.855	15.566	1.00	60.47
atom	1158	CB	PRO	149	30.440	-19.296	15.985	1.00	60.31
atom	1159	CG	PRO	149	30.429	-17.824	15.488	1.00	61.13
atom	1160	C	PRO	149	31.704	-21.270	15.029	1.00	60.70
atom	1161	O	PRO	149	32.355	-22.192	15.533	1.00	57.36
atom	1162	N	GLU	150	30.891	-21.405	13.984	1.00	61.42
atom	1163	CA	GLU	150	30.657	-22.671	13.310	1.00	63.50
atom	1164	CB	GLU	150	29.385	-22.574	12.458	1.00	62.03
atom	1165	CG	GLU	150	28.988	-21.142	12.092	1.00	64.13
atom	1166	CD	GLU	150	27.594	-20.762	12.586	1.00	64.99
atom	1167	OE1	GLU	150	27.032	-21.512	13.416	1.00	62.00
atom	1168	OE2	GLU	150	27.062	-19.713	12.144	1.00	63.63
atom	1169	C	GLU	150	31.857	-23.018	12.429	1.00	64.86
atom	1170	O	GLU	150	32.372	-22.162	11.698	1.00	65.78
atom	1171	N	LYS	151	32.295	-24.276	12.505	1.00	63.88
atom	1172	CA	LYS	151	33.434	-24.752	11.721	1.00	61.58
atom	1173	CB	LYS	151	33.575	-26.279	11.853	1.00	60.28
atom	1174	CG	LYS	151	34.871	-26.719	12.535	1.00	59.28
atom	1175	CD	LYS	151	35.407	-28.026	11.960	1.00	58.91

atom	1176	CE	LYS	151	36.444	-27.788	10.873	1.00	55.84
atom	1177	NZ	LYS	151	36.742	-29.060	10.151	1.00	54.75
atom	1178	C	LYS	151	33.323	-24.359	10.245	1.00	59.45
atom	1179	O	LYS	151	32.660	-25.025	9.446	1.00	58.87
atom	1180	N	GLY	152	33.985	-23.264	9.894	1.00	56.73
atom	1181	CA	GLY	152	33.955	-22.799	8.525	1.00	51.74
atom	1182	C	GLY	152	34.069	-21.297	8.429	1.00	46.83
atom	1183	O	GLY	152	35.170	-20.752	8.472	1.00	47.02
atom	1184	N	GLY	153	32.919	-20.642	8.303	1.00	43.27
atom	1185	CA	GLY	153	32.862	-19.196	8.184	1.00	40.87
atom	1186	C	GLY	153	34.145	-18.413	8.410	1.00	38.33
atom	1187	O	GLY	153	34.780	-18.524	9.459	1.00	39.52
atom	1188	N	ARG	154	34.520	-17.613	7.417	1.00	34.97
atom	1189	CA	ARG	154	35.715	-16.779	7.486	1.00	32.45
atom	1190	CB	ARG	154	36.855	-17.420	6.683	1.00	35.43
atom	1191	CG	ARG	154	38.057	-17.902	7.503	1.00	31.84
atom	1192	CD	ARG	154	39.220	-18.239	6.578	1.00	30.78
atom	1193	NE	ARG	154	40.334	-18.920	7.237	1.00	28.09
atom	1194	CZ	ARG	154	40.214	-20.000	8.002	1.00	27.73
atom	1195	NH1	ARG	154	39.016	-20.543	8.219	1.00	24.88
atom	1196	NH2	ARG	154	41.305	-20.547	8.530	1.00	23.63
atom	1197	C	ARG	154	35.327	-15.444	6.863	1.00	31.40
atom	1198	O	ARG	154	34.751	-15.407	5.779	1.00	33.74
atom	1199	N	LYS	155	35.628	-14.352	7.542	1.00	26.44
atom	1200	CA	LYS	155	35.280	-13.048	7.022	1.00	28.24
atom	1201	CB	LYS	155	35.199	-12.038	8.169	1.00	31.24
atom	1202	CG	LYS	155	33.904	-12.061	8.960	1.00	39.32
atom	1203	CD	LYS	155	33.977	-12.998	10.184	1.00	42.47
atom	1204	CE	LYS	155	33.946	-12.218	11.507	1.00	42.72
atom	1205	NZ	LYS	155	34.115	-10.739	11.325	1.00	43.82
atom	1206	C	LYS	155	36.293	-12.555	5.983	1.00	32.26
atom	1207	O	LYS	155	37.513	-12.613	6.197	1.00	33.23
atom	1208	N	PRO	156	35.803	-12.108	4.820	1.00	29.75
atom	1209	CD	PRO	156	34.393	-12.116	4.395	1.00	31.47
atom	1210	CA	PRO	156	36.695	-11.605	3.775	1.00	27.64
atom	1211	CB	PRO	156	35.786	-11.470	2.553	1.00	32.49

	atom	1212	CG	PRO	156	34.410	-11.329	3.114	1.00	33.60
	atom	1213	C	PRO	156	37.259	-10.257	4.199	1.00	23.07
	atom	1214	O	PRO	156	36.599	-9.519	4.909	1.00	17.17
	atom	1215	N	ALA	157	38.462	-9.938	3.732	1.00	21.07
	atom	1216	CA	ALA	157	39.117	-8.686	4.065	1.00	24.58
	atom	1217	CB	ALA	157	40.336	-8.493	3.204	1.00	22.78
	atom	1218	C	ALA	157	38.235	-7.460	3.954	1.00	29.30
	atom	1219	O	ALA	157	37.184	-7.488	3.332	1.00	33.80
	atom	1220	N	ARG	158	38.688	-6.381	4.583	1.00	32.78
	atom	1221	CA	ARG	158	38.008	-5.098	4.567	1.00	32.15
	atom	1222	CB	ARG	158	38.169	-4.394	5.914	1.00	40.12
	atom	1223	CG	ARG	158	37.058	-4.609	6.929	1.00	47.53
	atom	1224	CD	ARG	158	36.285	-3.313	7.180	1.00	55.54
	atom	1225	NE	ARG	158	36.836	-2.391	8.190	1.00	61.44
	atom	1226	CZ	ARG	158	38.102	-2.324	8.610	1.00	63.35
	atom	1227	NH1	ARG	158	39.043	-3.107	8.106	1.00	61.60
	atom	1228	NH2	ARG	158	38.441	-1.406	9.510	1.00	65.40
	atom	1229	C	ARG	158	38.761	-4.295	3.519	1.00	31.79
	atom	1230	O	ARG	158	39.981	-4.427	3.402	1.00	31.77
	atom	1231	N	LEU	159	38.061	-3.456	2.766	1.00	29.44
	atom	1232	CA	LEU	159	38.741	-2.668	1.753	1.00	27.36
	atom	1233	CB	LEU	159	37.964	-2.700	0.441	1.00	26.07
	atom	1234	CG	LEU	159	37.429	-4.030	-0.067	1.00	28.61
	atom	1235	CD1	LEU	159	37.472	-3.981	-1.570	1.00	27.06
	atom	1236	CD2	LEU	159	38.230	-5.213	0.478	1.00	25.15
	atom	1237	C	LEU	159	38.919	-1.224	2.158	1.00	25.85
	atom	1238	O	LEU	159	37.933	-0.485	2.227	1.00	28.34
	atom	1239	N	ILE	160	40.152	-0.808	2.435	1.00	22.77
	atom	1240	CA	ILE	160	40.361	0.592	2.767	1.00	20.88
	atom	1241	CB	ILE	160	41.536	0.815	3.781	1.00	24.70
	atom	1242	CG2	ILE	160	42.868	0.490	3.156	1.00	24.35
	atom	1243	CG1	ILE	160	41.551	2.286	4.246	1.00	32.26
	atom	1244	CD1	ILE	160	41.185	2.532	5.737	1.00	28.82
	atom	1245	C	ILE	160	40.587	1.379	1.469	1.00	21.09
	atom	1246	O	ILE	160	40.989	0.835	0.433	1.00	23.80
	atom	1247	N	VAL	161	40.263	2.660	1.520	1.00	20.69

	atom	1248	CA	VAL	161	40.389	3.540	0.381	1.00	14.88
	atom	1249	CB	VAL	161	39.006	3.809	-0.238	1.00	17.71
	atom	1250	CG1	VAL	161	39.145	4.786	-1.416	1.00	14.92
	atom	1251	CG2	VAL	161	38.367	2.496	-0.672	1.00	13.58
	atom	1252	C	VAL	161	40.945	4.845	0.915	1.00	16.90
	atom	1253	O	VAL	161	40.311	5.476	1.748	1.00	15.11
	atom	1254	N	PHE	162	42.119	5.253	0.440	1.00	18.75
	atom	1255	CA	PHE	162	42.739	6.491	0.916	1.00	20.01
	atom	1256	CB	PHE	162	43.758	6.169	1.999	1.00	19.59
	atom	1257	CG	PHE	162	44.806	5.187	1.564	1.00	23.70
	atom	1258	CD1	PHE	162	46.074	5.625	1.174	1.00	25.83
	atom	1259	CD2	PHE	162	44.540	3.825	1.561	1.00	20.41
	atom	1260	CE1	PHE	162	47.053	4.720	0.800	1.00	20.73
	atom	1261	CE2	PHE	162	45.515	2.908	1.187	1.00	19.90
	atom	1262	CZ	PHE	162	46.778	3.358	0.806	1.00	20.04
	atom	1263	C	PHE	162	43.444	7.281	-0.184	1.00	19.11
	atom	1264	O	PHE	162	44.000	6.699	-1.111	1.00	14.00
	atom	1265	N	PRO	163	43.443	8.624	-0.075	1.00	19.92
	atom	1266	CD	PRO	163	42.855	9.418	1.022	1.00	21.17
	atom	1267	CA	PRO	163	44.093	9.487	-1.067	1.00	17.86
	atom	1268	CB	PRO	163	43.545	10.877	-0.747	1.00	15.68
	atom	1269	CG	PRO	163	43.368	10.850	0.736	1.00	14.35
	atom	1270	C	PRO	163	45.607	9.403	-0.853	1.00	22.31
	atom	1271	O	PRO	163	46.111	8.460	-0.226	1.00	24.41
	atom	1272	N	ASP	164	46.332	10.388	-1.361	1.00	22.01
	atom	1273	CA	ASP	164	47.780	10.391	-1.229	1.00	21.25
	atom	1274	CB	ASP	164	48.412	10.949	-2.529	1.00	19.69
	atom	1275	CG	ASP	164	49.949	10.903	-2.528	1.00	23.69
	atom	1276	OD1	ASP	164	50.572	11.967	-2.317	1.00	25.14
	atom	1277	OD2	ASP	164	50.540	9.816	-2.752	1.00	21.70
	atom	1278	C	ASP	164	48.178	11.224	-0.010	1.00	21.07
	atom	1279	O	ASP	164	47.452	12.132	0.405	1.00	12.02
	atom	1280	N	LEU	165	49.332	10.878	0.558	1.00	22.66
	atom	1281	CA	LEU	165	49.900	11.555	1.713	1.00	24.15
	atom	1282	CB	LEU	165	51.400	11.222	1.798	1.00	27.73
	atom	1283	CG	LEU	165	52.241	11.808	2.941	1.00	26.96

	atom	1284	CD1	LEU	165	51.500	11.615	4.255	1.00	28.19
	atom	1285	CD2	LEU	165	53.601	11.141	2.994	1.00	22.52
	atom	1286	C	LEU	165	49.703	13.074	1.639	1.00	27.41
	atom	1287	O	LEU	165	49.275	13.727	2.611	1.00	26.48
	atom	1288	N	GLY	166	50.022	13.644	0.487	1.00	25.62
	atom	1289	CA	GLY	166	49.860	15.076	0.334	1.00	25.63
	atom	1290	C	GLY	166	48.423	15.536	0.489	1.00	23.50
	atom	1291	O	GLY	166	48.159	16.642	0.979	1.00	25.03
	atom	1292	N	VAL	167	47.485	14.708	0.050	1.00	20.02
	atom	1293	CA	VAL	167	46.083	15.073	0.193	1.00	22.84
	atom	1294	CB	VAL	167	45.130	14.090	-0.568	1.00	23.47
	atom	1295	CG1	VAL	167	43.683	14.363	-0.186	1.00	16.53
	atom	1296	CG2	VAL	167	45.314	14.262	-2.078	1.00	18.02
	atom	1297	C	VAL	167	45.809	15.037	1.687	1.00	20.03
	atom	1298	O	VAL	167	45.269	15.992	2.247	1.00	23.70
	atom	1299	N	ARG	168	46.222	13.947	2.324	1.00	17.55
	atom	1300	CA	ARG	168	46.067	13.778	3.762	1.00	20.44
	atom	1301	CB	ARG	168	46.728	12.449	4.207	1.00	12.81
	atom	1302	CG	ARG	168	45.716	11.280	4.213	1.00	16.04
	atom	1303	CD	ARG	168	46.295	9.883	4.312	1.00	5.81
	atom	1304	NE	ARG	168	47.747	9.865	4.348	1.00	20.84
	atom	1305	CZ	ARG	168	48.520	9.053	3.629	1.00	20.82
	atom	1306	NH1	ARG	168	49.841	9.135	3.753	1.00	21.78
	atom	1307	NH2	ARG	168	47.985	8.173	2.793	1.00	13.59
	atom	1308	C	ARG	168	46.616	14.986	4.562	1.00	21.22
	atom	1309	O	ARG	168	45.926	15.520	5.435	1.00	25.13
	atom	1310	N	VAL	169	47.830	15.440	4.276	1.00	20.35
	atom	1311	CA	VAL	169	48.330	16.588	5.024	1.00	21.02
	atom	1312	CB	VAL	169	49.747	17.053	4.542	1.00	19.12
	atom	1313	CG1	VAL	169	50.111	18.392	5.164	1.00	19.12
	atom	1314	CG2	VAL	169	50.783	16.035	4.926	1.00	19.71
	atom	1315	C	VAL	169	47.337	17.720	4.794	1.00	21.12
	atom	1316	O	VAL	169	46.975	18.451	5.719	1.00	23.38
	atom	1317	N	CYS	170	46.882	17.856	3.553	1.00	24.40
	atom	1318	CA	CYS	170	45.930	18.914	3.221	1.00	23.99
	atom	1319	CB	CYS	170	45.737	18.975	1.704	1.00	27.73

	atom	1320	SG	CYS	170	47.053	19.907	0.851	1.00	27.82
	atom	1321	C	CYS	170	44.587	18.719	3.934	1.00	21.58
	atom	1322	O	CYS	170	43.976	19.688	4.417	1.00	21.12
	atom	1323	N	GLU	171	44.133	17.471	4.016	1.00	17.50
	atom	1324	CA	GLU	171	42.873	17.209	4.698	1.00	17.37
	atom	1325	CB	GLU	171	42.585	15.696	4.788	1.00	8.09
	atom	1326	CG	GLU	171	42.018	15.116	3.479	1.00	2.63
	atom	1327	CD	GLU	171	41.405	13.716	3.623	1.00	7.97
	atom	1328	OE1	GLU	171	42.140	12.710	3.621	1.00	5.98
	atom	1329	OE2	GLU	171	40.165	13.612	3.729	1.00	10.44
	atom	1330	C	GLU	171	43.048	17.827	6.078	1.00	18.08
	atom	1331	O	GLU	171	42.221	18.643	6.508	1.00	14.20
	atom	1332	N	LYS	172	44.154	17.479	6.744	1.00	17.49
	atom	1333	CA	LYS	172	44.430	17.997	8.084	1.00	15.53
	atom	1334	CB	LYS	172	45.784	17.504	8.586	1.00	17.07
	atom	1335	CG	LYS	172	45.755	16.080	9.128	1.00	16.81
	atom	1336	CD	LYS	172	46.926	15.249	8.651	1.00	15.81
	atom	1337	CE	LYS	172	47.003	13.969	9.451	1.00	18.32
	atom	1338	NZ	LYS	172	46.760	12.732	8.657	1.00	19.19
	atom	1339	C	LYS	172	44.398	19.520	8.118	1.00	16.75
	atom	1340	O	LYS	172	43.710	20.111	8.944	1.00	17.86
	atom	1341	N	MET	173	45.118	20.168	7.218	1.00	18.49
	atom	1342	CA	MET	173	45.121	21.620	7.241	1.00	24.28
	atom	1343	CB	MET	173	45.859	22.184	6.023	1.00	23.81
	atom	1344	CG	MET	173	47.393	22.074	6.162	1.00	31.91
	atom	1345	SD	MET	173	48.315	22.350	4.636	1.00	33.08
	atom	1346	CE	MET	173	48.613	24.138	4.708	1.00	30.42
	atom	1347	C	MET	173	43.717	22.201	7.327	1.00	25.26
	atom	1348	O	MET	173	43.405	22.972	8.243	1.00	25.26
	atom	1349	N	ALA	174	42.846	21.805	6.412	1.00	24.64
	atom	1350	CA	ALA	174	41.504	22.358	6.419	1.00	21.63
	atom	1351	CB	ALA	174	41.040	22.527	5.000	1.00	26.50
	atom	1352	C	ALA	174	40.419	21.638	7.210	1.00	22.23
	atom	1353	O	ALA	174	39.342	22.184	7.391	1.00	27.05
	atom	1354	N	LEU	175	40.659	20.442	7.710	1.00	19.61
	atom	1355	CA	LEU	175	39.556	19.788	8.381	1.00	20.09

	atom	1356	CB	LEU	175	39.053	18.647	7.485	1.00	16.31
	atom	1357	CG	LEU	175	38.052	19.156	6.449	1.00	18.45
	atom	1358	CD1	LEU	175	37.614	18.030	5.517	1.00	24.83
	atom	1359	CD2	LEU	175	36.870	19.741	7.165	1.00	11.88
	atom	1360	C	LEU	175	39.757	19.289	9.802	1.00	21.41
	atom	1361	O	LEU	175	38.772	19.094	10.535	1.00	20.85
	atom	1362	N	TYR	176	41.015	19.090	10.187	1.00	21.89
	atom	1363	CA	TYR	176	41.335	18.598	11.515	1.00	24.83
	atom	1364	CB	TYR	176	42.829	18.726	11.780	1.00	26.94
	atom	1365	CG	TYR	176	43.214	18.142	13.116	1.00	25.66
	atom	1366	CD1	TYR	176	43.448	16.775	13.258	1.00	18.78
	atom	1367	CE1	TYR	176	43.747	16.224	14.494	1.00	16.22
	atom	1368	CD2	TYR	176	43.291	18.950	14.252	1.00	21.94
	atom	1369	CE2	TYR	176	43.587	18.412	15.492	1.00	20.54
	atom	1370	CZ	TYR	176	43.814	17.052	15.613	1.00	20.94
	atom	1371	OH	TYR	176	44.121	16.530	16.853	1.00	23.25
	atom	1372	C	TYR	176	40.554	19.293	12.637	1.00	24.52
	atom	1373	O	TYR	176	39.862	18.627	13.412	1.00	25.46
	atom	1374	N	ASP	177	40.666	20.616	12.719	1.00	21.86
	atom	1375	CA	ASP	177	39.966	21.391	13.744	1.00	25.80
	atom	1376	CB	ASP	177	40.211	22.904	13.566	1.00	27.06
	atom	1377	CG	ASP	177	39.818	23.727	14.809	1.00	30.16
	atom	1378	OD1	ASP	177	39.627	24.958	14.679	1.00	28.42
	atom	1379	OD2	ASP	177	39.709	23.150	15.916	1.00	32.67
	atom	1380	C	ASP	177	38.470	21.123	13.694	1.00	25.33
	atom	1381	O	ASP	177	37.849	20.802	14.712	1.00	20.56
	atom	1382	N	VAL	178	37.912	21.266	12.494	1.00	26.92
	atom	1383	CA	VAL	178	36.492	21.054	12.248	1.00	23.65
	atom	1384	CB	VAL	178	36.167	21.184	10.740	1.00	24.30
	atom	1385	CG1	VAL	178	34.698	20.831	10.489	1.00	23.59
	atom	1386	CG2	VAL	178	36.485	22.583	10.250	1.00	18.35
	atom	1387	C	VAL	178	36.080	19.656	12.670	1.00	22.32
	atom	1388	O	VAL	178	35.061	19.467	13.307	1.00	22.52
	atom	1389	N	VAL	179	36.895	18.681	12.293	1.00	20.85
	atom	1390	CA	VAL	179	36.621	17.280	12.550	1.00	18.50
	atom	1391	CB	VAL	179	37.458	16.431	11.518	1.00	16.61

	atom	1392	CG1	VAL	179	37.955	15.143	12.100	1.00	15.66
	atom	1393	CG2	VAL	179	36.619	16.160	10.292	1.00	5.70
	atom	1394	C	VAL	179	36.822	16.815	14.004	1.00	22.00
	atom	1395	O	VAL	179	36.422	15.698	14.367	1.00	24.16
	atom	1396	N	SER	180	37.410	17.659	14.844	1.00	19.26
	atom	1397	CA	SER	180	37.616	17.283	16.237	1.00	18.89
	atom	1398	CB	SER	180	39.097	17.258	16.576	1.00	16.52
	atom	1399	OG	SER	180	39.715	18.467	16.204	1.00	17.16
	atom	1400	C	SER	180	36.927	18.253	17.165	1.00	21.73
	atom	1401	O	SER	180	37.031	18.140	18.386	1.00	23.31
	atom	1402	N	THR	181	36.212	19.203	16.580	1.00	22.45
	atom	1403	CA	THR	181	35.532	20.221	17.353	1.00	24.30
	atom	1404	CB	THR	181	36.058	21.628	16.970	1.00	28.39
	atom	1405	OG1	THR	181	37.379	21.816	17.503	1.00	29.33
	atom	1406	CG2	THR	181	35.147	22.707	17.505	1.00	33.24
	atom	1407	C	THR	181	34.029	20.197	17.148	1.00	24.23
	atom	1408	O	THR	181	33.267	20.113	18.110	1.00	24.93
	atom	1409	N	LEU	182	33.615	20.243	15.889	1.00	22.10
	atom	1410	CA	LEU	182	32.196	20.293	15.526	1.00	20.36
	atom	1411	CB	LEU	182	32.080	20.555	14.018	1.00	16.55
	atom	1412	CG	LEU	182	30.797	20.158	13.293	1.00	14.05
	atom	1413	CD1	LEU	182	30.418	21.196	12.255	1.00	10.65
	atom	1414	CD2	LEU	182	31.027	18.818	12.648	1.00	17.47
	atom	1415	C	LEU	182	31.244	19.166	15.933	1.00	19.71
	atom	1416	O	LEU	182	30.086	19.423	16.258	1.00	18.27
	atom	1417	N	PRO	183	31.705	17.906	15.924	1.00	25.26
	atom	1418	CD	PRO	183	33.042	17.408	15.561	1.00	22.94
	atom	1419	CA	PRO	183	30.791	16.813	16.309	1.00	26.19
	atom	1420	CB	PRO	183	31.650	15.553	16.190	1.00	25.99
	atom	1421	CG	PRO	183	32.771	15.955	15.258	1.00	28.40
	atom	1422	C	PRO	183	30.163	16.941	17.697	1.00	28.45
	atom	1423	O	PRO	183	28.960	16.731	17.867	1.00	27.53
	atom	1424	N	GLN	184	30.973	17.291	18.689	1.00	29.12
	atom	1425	CA	GLN	184	30.457	17.423	20.044	1.00	30.02
	atom	1426	CB	GLN	184	31.593	17.714	21.030	1.00	32.88
	atom	1427	CG	GLN	184	31.424	17.008	22.361	1.00	44.70

	atom	1428	CD	GLN	184	32.084	17.747	23.517	1.00	53.40
	atom	1429	OE1	GLN	184	32.780	17.144	24.336	1.00	55.11
	atom	1430	NE2	GLN	184	31.867	19.059	23.589	1.00	56.18
	atom	1431	C	GLN	184	29.404	18.513	20.148	1.00	26.74
	atom	1432	O	GLN	184	28.369	18.330	20.789	1.00	27.35
	atom	1433	N	VAL	185	29.663	19.645	19.509	1.00	22.88
	atom	1434	CA	VAL	185	28.739	20.762	19.569	1.00	17.56
	atom	1435	CB	VAL	185	29.332	22.050	18.959	1.00	14.60
	atom	1436	CG1	VAL	185	28.385	23.218	19.234	1.00	10.54
	atom	1437	CG2	VAL	185	30.704	22.328	19.535	1.00	2.00
	atom	1438	C	VAL	185	27.443	20.463	18.855	1.00	19.70
	atom	1439	O	VAL	185	26.380	20.879	19.308	1.00	25.48
	atom	1440	N	VAL	186	27.519	19.746	17.745	1.00	16.42
	atom	1441	CA	VAL	186	26.314	19.422	16.999	1.00	15.36
	atom	1442	CB	VAL	186	26.636	18.915	15.547	1.00	17.22
	atom	1443	CG1	VAL	186	25.352	18.376	14.889	1.00	6.37
	atom	1444	CG2	VAL	186	27.269	20.040	14.696	1.00	10.49
	atom	1445	C	VAL	186	25.507	18.329	17.688	1.00	16.45
	atom	1446	O	VAL	186	24.301	18.441	17.867	1.00	17.72
	atom	1447	N	MET	187	26.181	17.263	18.082	1.00	19.36
	atom	1448	CA	MET	187	25.488	16.137	18.673	1.00	18.02
	atom	1449	CB	MET	187	26.114	14.835	18.132	1.00	19.04
	atom	1450	CG	MET	187	25.905	14.685	16.602	1.00	15.25
	atom	1451	SD	MET	187	26.989	13.529	15.686	1.00	21.34
	atom	1452	CE	MET	187	26.430	11.982	16.318	1.00	19.54
	atom	1453	C	MET	187	25.368	16.107	20.188	1.00	17.77
	atom	1454	O	MET	187	24.634	15.291	20.727	1.00	20.42
	atom	1455	N	GLY	188	26.071	16.992	20.879	1.00	18.50
	atom	1456	CA	GLY	188	25.980	17.008	22.331	1.00	18.93
	atom	1457	C	GLY	188	26.367	15.715	23.038	1.00	20.02
	atom	1458	O	GLY	188	27.305	15.026	22.619	1.00	18.77
	atom	1459	N	SER	189	25.629	15.374	24.094	1.00	14.72
	atom	1460	CA	SER	189	25.929	14.178	24.882	1.00	17.41
	atom	1461	CB	SER	189	25.009	14.067	26.111	1.00	13.37
	atom	1462	OG	SER	189	23.648	14.253	25.775	1.00	18.87
	atom	1463	C	SER	189	25.852	12.903	24.091	1.00	16.53

	atom	1464	O	SER	189	26.324	11.872	24.538	1.00	16.58
	atom	1465	N	SER	190	25.246	12.977	22.913	1.00	17.33
	atom	1466	CA	SER	190	25.125	11.824	22.047	1.00	13.26
	atom	1467	CB	SER	190	24.043	12.089	21.006	1.00	15.18
	atom	1468	OG	SER	190	22.754	11.965	21.565	1.00	17.55
	atom	1469	C	SER	190	26.445	11.470	21.329	1.00	15.65
	atom	1470	O	SER	190	26.548	10.385	20.740	1.00	19.34
	atom	1471	N	TYR	191	27.438	12.362	21.351	1.00	8.98
	atom	1472	CA	TYR	191	28.714	12.077	20.681	1.00	12.54
	atom	1473	CB	TYR	191	29.499	13.365	20.443	1.00	5.84
	atom	1474	CG	TYR	191	30.687	13.194	19.537	1.00	9.36
	atom	1475	CD1	TYR	191	30.586	12.475	18.344	1.00	17.61
	atom	1476	CE1	TYR	191	31.691	12.342	17.474	1.00	15.61
	atom	1477	CD2	TYR	191	31.921	13.773	19.848	1.00	11.77
	atom	1478	CE2	TYR	191	33.021	13.653	18.997	1.00	11.90
	atom	1479	CZ	TYR	191	32.903	12.939	17.808	1.00	17.33
	atom	1480	OH	TYR	191	33.977	12.844	16.944	1.00	16.44
	atom	1481	C	TYR	191	29.600	11.091	21.446	1.00	14.50
	atom	1482	O	TYR	191	30.391	11.485	22.298	1.00	15.97
	atom	1483	N	GLY	192	29.476	9.810	21.118	1.00	15.59
	atom	1484	CA	GLY	192	30.250	8.781	21.782	1.00	12.29
	atom	1485	C	GLY	192	31.742	8.991	22.011	1.00	17.19
	atom	1486	O	GLY	192	32.211	8.732	23.109	1.00	19.13
	atom	1487	N	PHE	193	32.504	9.460	21.019	1.00	17.70
	atom	1488	CA	PHE	193	33.952	9.606	21.221	1.00	15.80
	atom	1489	CB	PHE	193	34.661	9.856	19.886	1.00	11.01
	atom	1490	CG	PHE	193	34.444	8.755	18.874	1.00	13.47
	atom	1491	CD1	PHE	193	33.830	9.027	17.640	1.00	11.76
	atom	1492	CD2	PHE	193	34.772	7.430	19.184	1.00	9.11
	atom	1493	CE1	PHE	193	33.540	8.001	16.738	1.00	7.52
	atom	1494	CE2	PHE	193	34.491	6.392	18.296	1.00	12.98
	atom	1495	CZ	PHE	193	33.869	6.671	17.068	1.00	8.60
	atom	1496	C	PHE	193	34.410	10.629	22.258	1.00	15.64
	atom	1497	O	PHE	193	35.598	10.744	22.541	1.00	17.78
	atom	1498	N	GLN	194	33.491	11.387	22.823	1.00	13.73
	atom	1499	CA	GLN	194	33.887	12.344	23.846	1.00	15.41

	atom	1500	CB	GLN	194	32.829	13.438	23.994	1.00	12.32
	atom	1501	CG	GLN	194	31.587	12.978	24.740	1.00	7.74
	atom	1502	CD	GLN	194	30.468	13.971	24.640	1.00	8.05
	atom	1503	OE1	GLN	194	30.609	15.133	25.033	1.00	14.79
5	atom	1504	NE2	GLN	194	29.345	13.530	24.107	1.00	10.17
	atom	1505	C	GLN	194	34.000	11.583	25.175	1.00	18.96
	atom	1506	O	GLN	194	34.526	12.110	26.164	1.00	15.87
	atom	1507	N	TYR	195	33.513	10.337	25.171	1.00	15.53
	atom	1508	CA	TYR	195	33.487	9.502	26.359	1.00	13.49
10	atom	1509	CB	TYR	195	32.155	8.756	26.425	1.00	11.89
	atom	1510	CG	TYR	195	30.938	9.653	26.566	1.00	9.28
	atom	1511	CD1	TYR	195	29.799	9.424	25.807	1.00	9.75
	atom	1512	CE1	TYR	195	28.692	10.246	25.910	1.00	11.55
	atom	1513	CD2	TYR	195	30.934	10.748	27.449	1.00	11.85
15	atom	1514	CE2	TYR	195	29.823	11.580	27.559	1.00	5.30
	atom	1515	CZ	TYR	195	28.709	11.319	26.784	1.00	10.76
	atom	1516	OH	TYR	195	27.602	12.128	26.843	1.00	11.43
	atom	1517	C	TYR	195	34.612	8.499	26.525	1.00	16.38
	atom	1518	O	TYR	195	34.982	7.814	25.580	1.00	17.92
20	atom	1519	N	SER	196	35.164	8.422	27.733	1.00	18.29
	atom	1520	CA	SER	196	36.216	7.451	28.023	1.00	18.30
	atom	1521	CB	SER	196	36.977	7.816	29.313	1.00	22.24
	atom	1522	OG	SER	196	36.181	7.617	30.479	1.00	23.64
	atom	1523	C	SER	196	35.371	6.212	28.247	1.00	17.72
25	atom	1524	O	SER	196	34.153	6.324	28.403	1.00	19.27
	atom	1525	N	PRO	197	35.976	5.019	28.232	1.00	16.82
	atom	1526	CD	PRO	197	37.386	4.662	27.998	1.00	13.69
	atom	1527	CA	PRO	197	35.102	3.856	28.456	1.00	18.48
	atom	1528	CB	PRO	197	36.055	2.655	28.508	1.00	15.44
30	atom	1529	CG	PRO	197	37.430	3.186	28.251	1.00	13.60
	atom	1530	C	PRO	197	34.267	3.996	29.732	1.00	22.47
	atom	1531	O	PRO	197	33.106	3.576	29.780	1.00	24.03
	atom	1532	N	GLY	198	34.857	4.609	30.758	1.00	26.00
	atom	1533	CA	GLY	198	34.146	4.795	32.016	1.00	22.49
35	atom	1534	C	GLY	198	32.963	5.739	31.930	1.00	19.82
	atom	1535	O	GLY	198	31.891	5.490	32.501	1.00	16.46

	atom	1536	N	GLN	199	33.151	6.841	31.223	1.00	18.73
	atom	1537	CA	GLN	199	32.068	7.803	31.073	1.00	23.70
	atom	1538	CB	GLN	199	32.629	9.126	30.572	1.00	27.41
	atom	1539	CG	GLN	199	33.603	9.748	31.565	1.00	25.11
	atom	1540	CD	GLN	199	34.423	10.866	30.953	1.00	28.73
	atom	1541	OE1	GLN	199	34.928	10.749	29.836	1.00	24.01
	atom	1542	NE2	GLN	199	34.565	11.959	31.691	1.00	29.11
	atom	1543	C	GLN	199	30.966	7.282	30.146	1.00	23.70
	atom	1544	O	GLN	199	29.811	7.687	30.259	1.00	27.64
	atom	1545	N	ARG	200	31.315	6.365	29.250	1.00	21.06
	atom	1546	CA	ARG	200	30.321	5.800	28.348	1.00	20.42
	atom	1547	CB	ARG	200	30.966	4.893	27.302	1.00	22.05
	atom	1548	CG	ARG	200	30.362	5.040	25.924	1.00	23.88
	atom	1549	CD	ARG	200	30.118	3.686	25.224	1.00	27.31
	atom	1550	NE	ARG	200	29.382	3.869	23.968	1.00	25.09
	atom	1551	CZ	ARG	200	28.963	2.878	23.202	1.00	25.25
	atom	1552	NH1	ARG	200	29.203	1.615	23.551	1.00	35.28
	atom	1553	NH2	ARG	200	28.277	3.144	22.108	1.00	31.45
	atom	1554	C	ARG	200	29.334	4.984	29.145	1.00	20.31
	atom	1555	O	ARG	200	28.129	4.992	28.872	1.00	18.46
	atom	1556	N	VAL	201	29.845	4.270	30.143	1.00	19.63
	atom	1557	CA	VAL	201	28.976	3.448	30.963	1.00	16.19
	atom	1558	CB	VAL	201	29.806	2.422	31.770	1.00	22.14
	atom	1559	CG1	VAL	201	30.832	3.135	32.674	1.00	23.69
	atom	1560	CG2	VAL	201	28.872	1.512	32.558	1.00	24.34
	atom	1561	C	VAL	201	28.108	4.319	31.866	1.00	14.06
	atom	1562	O	VAL	201	26.894	4.112	31.976	1.00	9.57
	atom	1563	N	GLU	202	28.721	5.323	32.480	1.00	17.29
	atom	1564	CA	GLU	202	28.001	6.230	33.368	1.00	16.27
	atom	1565	CB	GLU	202	28.932	7.375	33.815	1.00	18.79
	atom	1566	CG	GLU	202	28.387	8.303	34.911	1.00	22.14
	atom	1567	CD	GLU	202	29.095	9.682	34.973	1.00	26.52
	atom	1568	OE1	GLU	202	30.211	9.846	34.411	1.00	26.38
	atom	1569	OE2	GLU	202	28.527	10.611	35.595	1.00	27.96
	atom	1570	C	GLU	202	26.789	6.788	32.616	1.00	20.96
	atom	1571	O	GLU	202	25.684	6.861	33.171	1.00	21.67

	atom	1572	N	PHE	203	26.995	7.137	31.343	1.00	17.78
	atom	1573	CA	PHE	203	25.938	7.704	30.518	1.00	15.51
	atom	1574	CB	PHE	203	26.564	8.415	29.308	1.00	17.40
	atom	1575	CG	PHE	203	25.562	9.060	28.381	1.00	19.79
	atom	1576	CD1	PHE	203	25.513	8.705	27.032	1.00	18.06
	atom	1577	CD2	PHE	203	24.641	9.996	28.860	1.00	18.97
	atom	1578	CE1	PHE	203	24.554	9.273	26.157	1.00	18.20
	atom	1579	CE2	PHE	203	23.677	10.579	28.005	1.00	18.76
	atom	1580	CZ	PHE	203	23.632	10.210	26.649	1.00	18.74
	atom	1581	C	PHE	203	24.873	6.682	30.078	1.00	18.12
	atom	1582	O	PHE	203	23.698	7.018	29.942	1.00	22.21
	atom	1583	N	LEU	204	25.245	5.433	29.858	1.00	16.27
	atom	1584	CA	LEU	204	24.218	4.472	29.445	1.00	16.36
	atom	1585	CB	LEU	204	24.857	3.195	28.877	1.00	13.44
	atom	1586	CG	LEU	204	25.741	3.468	27.656	1.00	19.06
	atom	1587	CD1	LEU	204	26.731	2.286	27.402	1.00	10.78
	atom	1588	CD2	LEU	204	24.813	3.750	26.438	1.00	15.03
	atom	1589	C	LEU	204	23.333	4.136	30.644	1.00	17.00
	atom	1590	O	LEU	204	22.109	4.216	30.560	1.00	15.29
	atom	1591	N	VAL	205	23.973	3.762	31.755	1.00	18.08
	atom	1592	CA	VAL	205	23.284	3.420	32.995	1.00	17.04
	atom	1593	CB	VAL	205	24.318	3.166	34.147	1.00	20.90
	atom	1594	CG1	VAL	205	23.624	2.604	35.359	1.00	21.59
	atom	1595	CG2	VAL	205	25.406	2.186	33.699	1.00	12.68
	atom	1596	C	VAL	205	22.360	4.592	33.370	1.00	19.87
	atom	1597	O	VAL	205	21.158	4.419	33.606	1.00	19.24
	atom	1598	N	ASN	206	22.917	5.795	33.393	1.00	22.07
	atom	1599	CA	ASN	206	22.132	6.979	33.737	1.00	23.89
	atom	1600	CB	ASN	206	22.996	8.232	33.716	1.00	25.89
	atom	1601	CG	ASN	206	23.746	8.415	34.985	1.00	20.05
	atom	1602	OD1	ASN	206	24.407	9.432	35.195	1.00	22.69
	atom	1603	ND2	ASN	206	23.658	7.418	35.856	1.00	23.43
	atom	1604	C	ASN	206	20.991	7.194	32.789	1.00	24.74
	atom	1605	O	ASN	206	19.867	7.455	33.213	1.00	25.78
	atom	1606	N	THR	207	21.285	7.124	31.498	1.00	23.73
	atom	1607	CA	THR	207	20.238	7.308	30.506	1.00	21.21

	atom	1608	CB	THR	207	20.761	7.038	29.091	1.00	17.74
	atom	1609	OG1	THR	207	21.634	8.104	28.693	1.00	17.23
	atom	1610	CG2	THR	207	19.602	6.942	28.113	1.00	21.34
	atom	1611	C	THR	207	19.120	6.332	30.840	1.00	20.22
5	atom	1612	O	THR	207	17.955	6.707	30.907	1.00	19.24
	atom	1613	N	TRP	208	19.506	5.082	31.057	1.00	22.59
	atom	1614	CA	TRP	208	18.594	3.994	31.406	1.00	26.82
	atom	1615	CB	TRP	208	19.398	2.698	31.526	1.00	25.67
	atom	1616	CG	TRP	208	18.569	1.475	31.504	1.00	30.25
10	atom	1617	CD2	TRP	208	18.151	0.744	30.347	1.00	31.50
	atom	1618	CE2	TRP	208	17.381	-0.347	30.800	1.00	32.48
	atom	1619	CE3	TRP	208	18.361	0.900	28.972	1.00	31.25
	atom	1620	CD1	TRP	208	18.047	0.821	32.580	1.00	30.65
	atom	1621	NE1	TRP	208	17.330	-0.272	32.165	1.00	33.94
15	atom	1622	CZ2	TRP	208	16.807	-1.273	29.927	1.00	33.68
	atom	1623	CZ3	TRP	208	17.789	-0.023	28.103	1.00	29.81
	atom	1624	CH2	TRP	208	17.025	-1.099	28.586	1.00	30.23
	atom	1625	C	TRP	208	17.836	4.252	32.724	1.00	30.48
	atom	1626	O	TRP	208	16.644	3.967	32.837	1.00	31.70
20	atom	1627	N	LYS	209	18.533	4.781	33.726	1.00	31.29
	atom	1628	CA	LYS	209	17.910	5.065	35.016	1.00	31.57
	atom	1629	CB	LYS	209	18.971	5.575	36.011	1.00	32.68
	atom	1630	CG	LYS	209	19.359	4.582	37.130	1.00	32.77
	atom	1631	CD	LYS	209	19.531	3.140	36.634	1.00	28.80
25	atom	1632	CE	LYS	209	20.900	2.596	37.038	1.00	32.66
	atom	1633	NZ	LYS	209	20.904	1.171	37.530	1.00	30.82
	atom	1634	C	LYS	209	16.788	6.098	34.892	1.00	31.92
	atom	1635	O	LYS	209	15.693	5.919	35.435	1.00	33.61
	atom	1636	N	SER	210	17.077	7.175	34.169	1.00	32.46
30	atom	1637	CA	SER	210	16.151	8.280	33.953	1.00	31.40
	atom	1638	CB	SER	210	16.869	9.400	33.203	1.00	30.64
	atom	1639	OG	SER	210	17.077	9.038	31.844	1.00	25.23
	atom	1640	C	SER	210	14.897	7.904	33.174	1.00	34.12
	atom	1641	O	SER	210	14.065	8.760	32.874	1.00	36.02
35	atom	1642	N	LYS	211	14.765	6.635	32.825	1.00	35.63
	atom	1643	CA	LYS	211	13.611	6.199	32.068	1.00	36.79

	atom	1644	CB	LYS	211	14.076	5.359	30.874	1.00	37.64
	atom	1645	CG	LYS	211	14.033	6.096	29.541	1.00	40.71
	atom	1646	CD	LYS	211	14.687	7.485	29.607	1.00	34.99
	atom	1647	CE	LYS	211	15.432	7.793	28.299	1.00	32.56
	atom	1648	NZ	LYS	211	15.501	9.269	28.000	1.00	32.07
	atom	1649	C	LYS	211	12.678	5.379	32.955	1.00	39.11
	atom	1650	O	LYS	211	13.080	4.348	33.501	1.00	38.97
	atom	1651	N	LYS	212	11.437	5.837	33.105	1.00	38.55
	atom	1652	CA	LYS	212	10.458	5.121	33.915	1.00	36.99
	atom	1653	CB	LYS	212	9.078	5.743	33.737	1.00	36.30
	atom	1654	CG	LYS	212	8.342	5.987	35.044	1.00	36.15
	atom	1655	CD	LYS	212	6.964	6.577	34.804	1.00	39.23
	atom	1656	CE	LYS	212	7.010	8.100	34.697	1.00	38.73
	atom	1657	NZ	LYS	212	8.342	8.623	34.290	1.00	39.49
	atom	1658	C	LYS	212	10.430	3.665	33.473	1.00	39.53
	atom	1659	O	LYS	212	10.689	2.743	34.261	1.00	40.63
	atom	1660	N	ASN	213	10.116	3.463	32.200	1.00	40.43
	atom	1661	CA	ASN	213	10.080	2.123	31.630	1.00	42.69
	atom	1662	CB	ASN	213	8.666	1.791	31.192	1.00	43.07
	atom	1663	CG	ASN	213	7.772	1.505	32.371	1.00	46.76
	atom	1664	OD1	ASN	213	7.835	0.422	32.957	1.00	47.62
	atom	1665	ND2	ASN	213	6.947	2.481	32.745	1.00	46.32
	atom	1666	C	ASN	213	11.060	2.084	30.466	1.00	42.95
	atom	1667	O	ASN	213	10.702	2.348	29.314	1.00	45.85
	atom	1668	N	PRO	214	12.327	1.750	30.766	1.00	40.90
	atom	1669	CD	PRO	214	12.785	1.397	32.123	1.00	39.79
	atom	1670	CA	PRO	214	13.425	1.671	29.800	1.00	37.68
	atom	1671	CB	PRO	214	14.667	1.543	30.686	1.00	38.00
	atom	1672	CG	PRO	214	14.171	0.841	31.884	1.00	37.99
	atom	1673	C	PRO	214	13.381	0.578	28.744	1.00	32.67
	atom	1674	O	PRO	214	13.064	-0.577	29.032	1.00	29.82
	atom	1675	N	MET	215	13.710	0.975	27.516	1.00	29.28
	atom	1676	CA	MET	215	13.787	0.062	26.381	1.00	28.70
	atom	1677	CB	MET	215	12.482	-0.009	25.586	1.00	31.55
	atom	1678	CG	MET	215	12.483	-1.115	24.526	1.00	33.14
	atom	1679	SD	MET	215	13.178	-0.629	22.912	1.00	45.41

	atom	1680	CE	MET	215	12.066	0.723	22.425	1.00	32.71
	atom	1681	C	MET	215	14.854	0.626	25.492	1.00	25.79
	atom	1682	O	MET	215	14.842	1.809	25.189	1.00	24.07
	atom	1683	N	GLY	216	15.783	-0.225	25.089	1.00	24.09
	atom	1684	CA	GLY	216	16.851	0.217	24.227	1.00	27.37
	atom	1685	C	GLY	216	17.162	-0.805	23.159	1.00	29.11
	atom	1686	O	GLY	216	16.829	-1.984	23.297	1.00	25.38
	atom	1687	N	PHE	217	17.800	-0.337	22.089	1.00	28.33
	atom	1688	CA	PHE	217	18.178	-1.187	20.972	1.00	23.94
	atom	1689	CB	PHE	217	17.000	-1.358	19.993	1.00	23.25
	atom	1690	CG	PHE	217	16.607	-0.088	19.263	1.00	25.96
	atom	1691	CD1	PHE	217	15.608	0.750	19.772	1.00	21.53
	atom	1692	CD2	PHE	217	17.275	0.303	18.092	1.00	26.41
	atom	1693	CE1	PHE	217	15.291	1.961	19.135	1.00	17.44
	atom	1694	CE2	PHE	217	16.963	1.519	17.449	1.00	20.57
	atom	1695	CZ	PHE	217	15.972	2.345	17.975	1.00	20.28
	atom	1696	C	PHE	217	19.374	-0.596	20.235	1.00	24.89
	atom	1697	O	PHE	217	19.630	0.615	20.272	1.00	20.32
	atom	1698	N	SER	218	20.120	-1.471	19.574	1.00	23.15
	atom	1699	CA	SER	218	21.248	-1.035	18.798	1.00	23.07
	atom	1700	CB	SER	218	22.444	-1.944	19.033	1.00	21.49
	atom	1701	OG	SER	218	22.202	-3.237	18.523	1.00	31.71
	atom	1702	C	SER	218	20.748	-1.150	17.378	1.00	20.95
	atom	1703	O	SER	218	19.726	-1.747	17.133	1.00	23.34
	atom	1704	N	TYR	219	21.443	-0.543	16.442	1.00	23.35
	atom	1705	CA	TYR	219	21.033	-0.626	15.065	1.00	26.89
	atom	1706	CB	TYR	219	20.457	0.703	14.586	1.00	26.99
	atom	1707	CG	TYR	219	19.825	0.594	13.223	1.00	30.65
	atom	1708	CD1	TYR	219	18.465	0.311	13.089	1.00	29.87
	atom	1709	CE1	TYR	219	17.876	0.163	11.835	1.00	29.80
	atom	1710	CD2	TYR	219	20.582	0.735	12.068	1.00	24.76
	atom	1711	CE2	TYR	219	19.999	0.588	10.803	1.00	27.12
	atom	1712	CZ	TYR	219	18.650	0.297	10.696	1.00	25.91
	atom	1713	OH	TYR	219	18.078	0.077	9.467	1.00	24.76
	atom	1714	C	TYR	219	22.285	-0.950	14.296	1.00	27.84
	atom	1715	O	TYR	219	23.205	-0.139	14.248	1.00	29.53

	atom	1716	N	ASP	220	22.339	-2.146	13.727	1.00	30.08
	atom	1717	CA	ASP	220	23.504	-2.543	12.957	1.00	33.29
	atom	1718	CB	ASP	220	23.858	-4.008	13.210	1.00	35.05
	atom	1719	CG	ASP	220	25.298	-4.323	12.832	1.00	42.78
	atom	1720	OD1	ASP	220	26.198	-3.524	13.199	1.00	39.17
	atom	1721	OD2	ASP	220	25.528	-5.359	12.163	1.00	44.93
	atom	1722	C	ASP	220	23.228	-2.321	11.477	1.00	34.67
	atom	1723	O	ASP	220	22.479	-3.066	10.844	1.00	33.26
	atom	1724	N	THR	221	23.824	-1.279	10.926	1.00	34.32
	atom	1725	CA	THR	221	23.615	-0.982	9.526	1.00	40.37
	atom	1726	CB	THR	221	23.590	0.557	9.343	1.00	43.40
	atom	1727	OG1	THR	221	24.090	0.910	8.045	1.00	50.75
	atom	1728	CG2	THR	221	24.411	1.230	10.446	1.00	43.75
	atom	1729	C	THR	221	24.684	-1.680	8.649	1.00	39.39
	atom	1730	O	THR	221	25.886	-1.562	8.905	1.00	39.42
	atom	1731	N	ARG	222	24.235	-2.423	7.637	1.00	37.18
	atom	1732	CA	ARG	222	25.135	-3.164	6.744	1.00	39.11
	atom	1733	CB	ARG	222	24.307	-4.023	5.791	1.00	45.56
	atom	1734	CG	ARG	222	24.093	-5.431	6.300	1.00	55.54
	atom	1735	CD	ARG	222	24.475	-6.485	5.274	1.00	59.47
	atom	1736	NE	ARG	222	25.722	-6.166	4.580	1.00	64.34
	atom	1737	CZ	ARG	222	26.245	-6.908	3.604	1.00	65.70
	atom	1738	NH1	ARG	222	25.631	-8.014	3.202	1.00	65.11
	atom	1739	NH2	ARG	222	27.385	-6.547	3.029	1.00	67.19
	atom	1740	C	ARG	222	26.122	-2.310	5.931	1.00	35.46
	atom	1741	O	ARG	222	25.705	-1.490	5.107	1.00	34.40
	atom	1742	N	CYS	223	27.423	-2.538	6.131	1.00	28.88
	atom	1743	CA	CYS	223	28.456	-1.758	5.441	1.00	26.28
	atom	1744	CB	CYS	223	28.749	-2.303	4.037	1.00	29.39
	atom	1745	SG	CYS	223	27.944	-3.863	3.601	1.00	38.08
	atom	1746	C	CYS	223	27.962	-0.322	5.340	1.00	24.05
	atom	1747	O	CYS	223	27.491	0.138	4.295	1.00	25.92
	atom	1748	N	PHE	224	28.054	0.382	6.453	1.00	19.70
	atom	1749	CA	PHE	224	27.591	1.747	6.497	1.00	17.64
	atom	1750	CB	PHE	224	27.821	2.337	7.886	1.00	12.43
	atom	1751	CG	PHE	224	27.217	3.673	8.050	1.00	7.26

	atom	1752	CD1	PHE	224	27.972	4.798	7.873	1.00	4.39
	atom	1753	CD2	PHE	224	25.868	3.802	8.321	1.00	14.24
	atom	1754	CE1	PHE	224	27.403	6.043	7.954	1.00	13.01
	atom	1755	CE2	PHE	224	25.284	5.052	8.409	1.00	17.89
	atom	1756	CZ	PHE	224	26.059	6.178	8.221	1.00	13.77
	atom	1757	C	PHE	224	28.281	2.610	5.450	1.00	19.95
	atom	1758	O	PHE	224	27.681	3.530	4.896	1.00	18.36
	atom	1759	N	ASP	225	29.553	2.307	5.203	1.00	19.46
	atom	1760	CA	ASP	225	30.350	3.038	4.234	1.00	16.98
	atom	1761	CB	ASP	225	31.786	2.521	4.245	1.00	18.48
	atom	1762	CG	ASP	225	32.558	2.987	5.469	1.00	17.19
	atom	1763	OD1	ASP	225	31.911	3.485	6.411	1.00	16.85
	atom	1764	OD2	ASP	225	33.800	2.859	5.495	1.00	15.85
	atom	1765	C	ASP	225	29.767	2.922	2.845	1.00	17.55
	atom	1766	O	ASP	225	29.769	3.896	2.096	1.00	21.54
	atom	1767	N	SER	226	29.245	1.744	2.510	1.00	15.71
	atom	1768	CA	SER	226	28.659	1.532	1.191	1.00	15.91
	atom	1769	CB	SER	226	28.627	0.038	0.870	1.00	16.80
	atom	1770	OG	SER	226	29.917	-0.361	0.431	1.00	20.72
	atom	1771	C	SER	226	27.266	2.129	0.999	1.00	14.79
	atom	1772	O	SER	226	26.794	2.272	-0.131	1.00	10.79
	atom	1773	N	THR	227	26.607	2.482	2.095	1.00	10.83
	atom	1774	CA	THR	227	25.277	3.062	1.995	1.00	10.05
	atom	1775	CB	THR	227	24.354	2.627	3.168	1.00	11.24
	atom	1776	OG1	THR	227	24.763	3.281	4.382	1.00	11.86
	atom	1777	CG2	THR	227	24.412	1.118	3.357	1.00	11.50
	atom	1778	C	THR	227	25.329	4.568	1.991	1.00	8.11
	atom	1779	O	THR	227	24.325	5.209	1.778	1.00	13.22
	atom	1780	N	VAL	228	26.493	5.147	2.242	1.00	8.22
	atom	1781	CA	VAL	228	26.569	6.592	2.240	1.00	9.96
	atom	1782	CB	VAL	228	27.840	7.081	2.953	1.00	8.30
	atom	1783	CG1	VAL	228	27.936	8.619	2.886	1.00	6.75
	atom	1784	CG2	VAL	228	27.811	6.616	4.413	1.00	9.43
	atom	1785	C	VAL	228	26.517	7.107	0.793	1.00	12.92
	atom	1786	O	VAL	228	27.288	6.682	-0.071	1.00	13.47
	atom	1787	N	THR	229	25.590	8.021	0.538	1.00	11.04

	atom	1788	CA	THR	229	25.427	8.565	-0.789	1.00	8.65
	atom	1789	CB	THR	229	23.955	8.920	-1.078	1.00	7.29
	atom	1790	OG1	THR	229	23.533	9.985	-0.220	1.00	6.72
	atom	1791	CG2	THR	229	23.072	7.725	-0.857	1.00	5.69
	atom	1792	C	THR	229	26.253	9.810	-0.975	1.00	14.70
	atom	1793	O	THR	229	26.908	10.312	-0.034	1.00	17.11
	atom	1794	N	GLU	230	26.216	10.310	-2.202	1.00	13.67
	atom	1795	CA	GLU	230	26.942	11.505	-2.546	1.00	16.34
	atom	1796	CB	GLU	230	26.966	11.675	-4.063	1.00	25.51
	atom	1797	CG	GLU	230	27.859	10.646	-4.769	1.00	33.02
	atom	1798	CD	GLU	230	28.214	11.051	-6.205	1.00	37.67
	atom	1799	OE1	GLU	230	27.662	12.071	-6.696	1.00	35.36
	atom	1800	OE2	GLU	230	29.032	10.342	-6.842	1.00	37.90
	atom	1801	C	GLU	230	26.161	12.614	-1.875	1.00	16.73
	atom	1802	O	GLU	230	26.735	13.615	-1.405	1.00	17.25
	atom	1803	N	ASN	231	24.846	12.427	-1.824	1.00	11.87
	atom	1804	CA	ASN	231	23.980	13.395	-1.171	1.00	13.37
	atom	1805	CB	ASN	231	22.541	12.915	-1.146	1.00	18.87
	atom	1806	CG	ASN	231	21.674	13.754	-0.224	1.00	22.44
	atom	1807	OD1	ASN	231	21.404	13.378	0.945	1.00	20.22
	atom	1808	ND2	ASN	231	21.227	14.901	-0.740	1.00	16.41
	atom	1809	C	ASN	231	24.429	13.574	0.272	1.00	14.51
	atom	1810	O	ASN	231	24.603	14.698	0.736	1.00	14.73
	atom	1811	N	ASP	232	24.589	12.444	0.968	1.00	9.18
	atom	1812	CA	ASP	232	25.019	12.397	2.361	1.00	2.81
	atom	1813	CB	ASP	232	25.273	10.948	2.754	1.00	2.00
	atom	1814	CG	ASP	232	24.007	10.123	2.818	1.00	3.91
	atom	1815	OD1	ASP	232	24.123	8.884	2.744	1.00	9.28
	atom	1816	OD2	ASP	232	22.907	10.699	2.965	1.00	3.11
	atom	1817	C	ASP	232	26.297	13.208	2.593	1.00	7.49
	atom	1818	O	ASP	232	26.370	14.058	3.490	1.00	6.80
	atom	1819	N	ILE	233	27.301	12.916	1.768	1.00	7.99
	atom	1820	CA	ILE	233	28.601	13.563	1.811	1.00	11.68
	atom	1821	CB	ILE	233	29.605	12.815	0.883	1.00	14.22
	atom	1822	CG2	ILE	233	30.959	13.488	0.910	1.00	9.87
	atom	1823	CG1	ILE	233	29.712	11.356	1.330	1.00	13.00

	atom	1824	CD1	ILE	233	30.208	10.420	0.259	1.00	17.42
	atom	1825	C	ILE	233	28.493	15.035	1.406	1.00	13.08
	atom	1826	O	ILE	233	29.301	15.865	1.857	1.00	10.58
	atom	1827	N	ARG	234	27.500	15.358	0.567	1.00	8.44
	atom	1828	CA	ARG	234	27.309	16.757	0.168	1.00	11.28
	atom	1829	CB	ARG	234	26.503	16.874	-1.126	1.00	7.95
	atom	1830	CG	ARG	234	27.386	17.175	-2.321	1.00	16.94
	atom	1831	CD	ARG	234	26.599	17.287	-3.641	1.00	21.36
	atom	1832	NE	ARG	234	27.055	16.325	-4.635	1.00	23.26
	atom	1833	CZ	ARG	234	26.298	15.336	-5.117	1.00	32.75
	atom	1834	NH1	ARG	234	25.041	15.180	-4.696	1.00	31.97
	atom	1835	NH2	ARG	234	26.794	14.487	-6.018	1.00	30.89
	atom	1836	C	ARG	234	26.598	17.465	1.313	1.00	9.87
	atom	1837	O	ARG	234	26.938	18.584	1.667	1.00	13.65
	atom	1838	N	VAL	235	25.628	16.781	1.899	1.00	11.65
	atom	1839	CA	VAL	235	24.877	17.288	3.036	1.00	14.47
	atom	1840	CB	VAL	235	23.835	16.230	3.495	1.00	19.62
	atom	1841	CG1	VAL	235	23.317	16.571	4.900	1.00	20.51
	atom	1842	CG2	VAL	235	22.682	16.145	2.464	1.00	9.35
	atom	1843	C	VAL	235	25.920	17.542	4.133	1.00	17.66
	atom	1844	O	VAL	235	25.869	18.531	4.872	1.00	15.50
	atom	1845	N	GLU	236	26.886	16.638	4.210	1.00	16.40
	atom	1846	CA	GLU	236	27.970	16.777	5.165	1.00	20.33
	atom	1847	CB	GLU	236	28.975	15.657	4.955	1.00	25.29
	atom	1848	CG	GLU	236	29.424	14.936	6.184	1.00	25.35
	atom	1849	CD	GLU	236	30.025	13.596	5.825	1.00	29.20
	atom	1850	OE1	GLU	236	29.252	12.618	5.745	1.00	28.57
	atom	1851	OE2	GLU	236	31.259	13.525	5.614	1.00	30.14
	atom	1852	C	GLU	236	28.693	18.115	4.974	1.00	21.64
	atom	1853	O	GLU	236	28.745	18.938	5.876	1.00	26.74
	atom	1854	N	GLU	237	29.265	18.326	3.797	1.00	23.33
	atom	1855	CA	GLU	237	29.996	19.559	3.523	1.00	23.89
	atom	1856	CB	GLU	237	30.296	19.659	2.034	1.00	26.90
	atom	1857	CG	GLU	237	31.301	20.729	1.673	1.00	26.92
	atom	1858	CD	GLU	237	30.722	21.798	0.750	1.00	27.74
	atom	1859	OE1	GLU	237	29.478	21.923	0.641	1.00	30.50

	atom	1860	OE2	GLU	237	31.519	22.525	0.130	1.00	28.50
	atom	1861	C	GLU	237	29.281	20.836	3.981	1.00	26.41
	atom	1862	O	GLU	237	29.911	21.733	4.582	1.00	25.46
	atom	1863	N	SER	238	27.974	20.914	3.717	1.00	25.02
	atom	1864	CA	SER	238	27.196	22.107	4.074	1.00	22.49
	atom	1865	CB	SER	238	25.777	22.032	3.478	1.00	16.69
	atom	1866	OG	SER	238	24.900	21.199	4.212	1.00	20.89
	atom	1867	C	SER	238	27.147	22.366	5.579	1.00	22.37
	atom	1868	O	SER	238	26.990	23.508	6.021	1.00	24.42
	atom	1869	N	ILE	239	27.275	21.299	6.360	1.00	19.82
	atom	1870	CA	ILE	239	27.289	21.418	7.814	1.00	19.33
	atom	1871	CB	ILE	239	27.151	20.038	8.484	1.00	13.89
	atom	1872	CG2	ILE	239	27.508	20.136	9.957	1.00	15.54
	atom	1873	CG1	ILE	239	25.710	19.542	8.318	1.00	11.04
	atom	1874	CD1	ILE	239	25.461	18.182	8.905	1.00	10.17
	atom	1875	C	ILE	239	28.642	22.051	8.194	1.00	20.13
	atom	1876	O	ILE	239	28.699	23.007	8.960	1.00	22.13
	atom	1877	N	TYR	240	29.727	21.513	7.646	1.00	19.22
	atom	1878	CA	TYR	240	31.048	22.060	7.898	1.00	15.07
	atom	1879	CB	TYR	240	32.112	21.347	7.064	1.00	13.88
	atom	1880	CG	TYR	240	32.230	19.866	7.286	1.00	15.11
	atom	1881	CD1	TYR	240	31.792	19.277	8.479	1.00	8.75
	atom	1882	CE1	TYR	240	31.869	17.908	8.665	1.00	15.58
	atom	1883	CD2	TYR	240	32.756	19.039	6.278	1.00	13.45
	atom	1884	CE2	TYR	240	32.837	17.662	6.446	1.00	13.68
	atom	1885	CZ	TYR	240	32.388	17.097	7.647	1.00	19.24
	atom	1886	OH	TYR	240	32.418	15.727	7.815	1.00	20.07
	atom	1887	C	TYR	240	31.079	23.527	7.500	1.00	16.70
	atom	1888	O	TYR	240	31.694	24.334	8.182	1.00	17.96
	atom	1889	N	GLN	241	30.420	23.868	6.389	1.00	16.23
	atom	1890	CA	GLN	241	30.431	25.247	5.899	1.00	16.04
	atom	1891	CB	GLN	241	29.917	25.330	4.449	1.00	16.08
	atom	1892	CG	GLN	241	30.731	24.579	3.398	1.00	11.75
	atom	1893	CD	GLN	241	32.112	25.173	3.138	1.00	18.57
	atom	1894	OE1	GLN	241	32.427	26.294	3.568	1.00	15.79
	atom	1895	NE2	GLN	241	32.952	24.412	2.430	1.00	17.59

	atom	1896	C	GLN	241	29.586	26.156	6.779	1.00	17.93
	atom	1897	O	GLN	241	29.619	27.377	6.657	1.00	17.53
	atom	1898	N	CYS	242	28.800	25.563	7.656	1.00	18.94
	atom	1899	CA	CYS	242	27.997	26.374	8.525	1.00	17.02
	atom	1900	CB	CYS	242	26.913	25.522	9.151	1.00	16.04
	atom	1901	SG	CYS	242	25.544	25.335	8.008	1.00	24.73
	atom	1902	C	CYS	242	28.939	26.970	9.570	1.00	20.09
	atom	1903	O	CYS	242	28.577	27.915	10.285	1.00	19.17
	atom	1904	N	CYS	243	30.151	26.418	9.640	1.00	20.20
	atom	1905	CA	CYS	243	31.178	26.907	10.566	1.00	23.27
	atom	1906	CB	CYS	243	32.376	25.960	10.640	1.00	14.78
	atom	1907	SG	CYS	243	32.059	24.399	11.401	1.00	28.23
	atom	1908	C	CYS	243	31.716	28.231	10.053	1.00	24.81
	atom	1909	O	CYS	243	31.478	28.618	8.907	1.00	21.57
	atom	1910	N	ASP	244	32.454	28.910	10.920	1.00	27.15
	atom	1911	CA	ASP	244	33.096	30.162	10.575	1.00	27.32
	atom	1912	CB	ASP	244	33.168	31.079	11.788	1.00	29.98
	atom	1913	CG	ASP	244	33.961	32.327	11.520	1.00	32.64
	atom	1914	OD1	ASP	244	35.153	32.218	11.148	1.00	38.30
	atom	1915	OD2	ASP	244	33.383	33.421	11.680	1.00	36.55
	atom	1916	C	ASP	244	34.491	29.706	10.207	1.00	25.37
	atom	1917	O	ASP	244	35.288	29.396	11.085	1.00	25.42
	atom	1918	N	LEU	245	34.779	29.642	8.914	1.00	26.28
	atom	1919	CA	LEU	245	36.091	29.195	8.447	1.00	25.14
	atom	1920	CB	LEU	245	35.949	27.908	7.621	1.00	22.96
	atom	1921	CG	LEU	245	35.273	26.675	8.231	1.00	23.72
	atom	1922	CD1	LEU	245	34.368	26.067	7.198	1.00	24.49
	atom	1923	CD2	LEU	245	36.324	25.663	8.693	1.00	23.37
	atom	1924	C	LEU	245	36.856	30.221	7.609	1.00	24.63
	atom	1925	O	LEU	245	36.279	31.088	6.942	1.00	18.91
	atom	1926	N	ALA	246	38.174	30.124	7.656	1.00	23.55
	atom	1927	CA	ALA	246	38.977	31.005	6.848	1.00	25.33
	atom	1928	CB	ALA	246	40.438	30.624	6.983	1.00	20.46
	atom	1929	C	ALA	246	38.486	30.762	5.403	1.00	26.44
	atom	1930	O	ALA	246	38.043	29.661	5.059	1.00	22.87
	atom	1931	N	PRO	247	38.545	31.792	4.551	1.00	27.75

atom	1932	CD	PRO	247	39.022	33.146	4.888	1.00	29.33
atom	1933	CA	PRO	247	38.115	31.692	3.146	1.00	27.64
atom	1934	CB	PRO	247	38.414	33.087	2.580	1.00	27.58
atom	1935	CG	PRO	247	38.454	33.995	3.776	1.00	26.40
atom	1936	C	PRO	247	38.840	30.579	2.359	1.00	27.38
atom	1937	O	PRO	247	38.271	29.965	1.459	1.00	29.24
atom	1938	N	GLU	248	40.096	30.337	2.714	1.00	28.05
atom	1939	CA	GLU	248	40.929	29.318	2.091	1.00	29.67
atom	1940	CB	GLU	248	42.393	29.586	2.414	1.00	34.83
atom	1941	CG	GLU	248	43.039	30.614	1.534	1.00	39.97
atom	1942	CD	GLU	248	44.346	30.125	1.007	1.00	42.38
atom	1943	OE1	GLU	248	44.441	28.909	0.723	1.00	41.58
atom	1944	OE2	GLU	248	45.276	30.953	0.886	1.00	46.44
atom	1945	C	GLU	248	40.587	27.915	2.577	1.00	31.59
atom	1946	O	GLU	248	41.035	26.925	2.000	1.00	33.38
atom	1947	N	ALA	249	39.842	27.830	3.671	1.00	26.50
atom	1948	CA	ALA	249	39.443	26.536	4.197	1.00	27.06
atom	1949	CB	ALA	249	39.252	26.608	5.740	1.00	26.73
atom	1950	C	ALA	249	38.127	26.175	3.507	1.00	24.26
atom	1951	O	ALA	249	37.915	25.031	3.116	1.00	22.21
atom	1952	N	ARG	250	37.255	27.171	3.361	1.00	21.09
atom	1953	CA	ARG	250	35.977	26.975	2.708	1.00	23.70
atom	1954	CB	ARG	250	35.253	28.303	2.588	1.00	24.08
atom	1955	CG	ARG	250	34.559	28.758	3.838	1.00	26.58
atom	1956	CD	ARG	250	33.609	29.897	3.519	1.00	24.24
atom	1957	NE	ARG	250	33.130	30.578	4.722	1.00	30.88
atom	1958	CZ	ARG	250	32.457	29.991	5.708	1.00	29.40
atom	1959	NH1	ARG	250	32.172	28.698	5.646	1.00	28.52
atom	1960	NH2	ARG	250	32.059	30.705	6.754	1.00	35.08
atom	1961	C	ARG	250	36.192	26.389	1.315	1.00	24.50
atom	1962	O	ARG	250	35.510	25.454	0.909	1.00	24.79
atom	1963	N	GLN	251	37.151	26.941	0.585	1.00	29.49
atom	1964	CA	GLN	251	37.447	26.472	-0.766	1.00	35.02
atom	1965	CB	GLN	251	38.282	27.521	-1.512	1.00	37.24
atom	1966	CG	GLN	251	38.861	27.047	-2.830	1.00	41.03
atom	1967	CD	GLN	251	37.859	27.078	-3.976	1.00	44.34

	atom	1968	OE1	GLN	251	36.701	27.488	-3.816	1.00	42.71
	atom	1969	NE2	GLN	251	38.306	26.639	-5.148	1.00	47.74
	atom	1970	C	GLN	251	38.187	25.133	-0.727	1.00	34.35
	atom	1971	O	GLN	251	38.268	24.414	-1.728	1.00	35.38
	atom	1972	N	ALA	252	38.717	24.802	0.444	1.00	32.62
	atom	1973	CA	ALA	252	39.445	23.553	0.640	1.00	28.56
	atom	1974	CB	ALA	252	40.387	23.674	1.855	1.00	28.67
	atom	1975	C	ALA	252	38.443	22.446	0.880	1.00	25.19
	atom	1976	O	ALA	252	38.584	21.335	0.377	1.00	27.94
	atom	1977	N	ILE	253	37.421	22.778	1.650	1.00	22.24
	atom	1978	CA	ILE	253	36.392	21.837	2.009	1.00	25.51
	atom	1979	CB	ILE	253	35.595	22.374	3.233	1.00	25.74
	atom	1980	CG2	ILE	253	34.181	21.797	3.265	1.00	24.44
	atom	1981	CG1	ILE	253	36.343	22.019	4.516	1.00	22.76
	atom	1982	CD1	ILE	253	36.621	23.207	5.389	1.00	18.85
	atom	1983	C	ILE	253	35.454	21.554	0.841	1.00	28.08
	atom	1984	O	ILE	253	34.925	20.446	0.716	1.00	28.67
	atom	1985	N	LYS	254	35.238	22.550	-0.013	1.00	28.48
	atom	1986	CA	LYS	254	34.360	22.351	-1.161	1.00	27.11
	atom	1987	CB	LYS	254	34.058	23.679	-1.860	1.00	31.43
	atom	1988	CG	LYS	254	32.965	23.584	-2.896	1.00	32.39
	atom	1989	CD	LYS	254	33.352	24.244	-4.201	1.00	38.30
	atom	1990	CE	LYS	254	32.218	25.132	-4.707	1.00	40.12
	atom	1991	NZ	LYS	254	31.540	24.542	-5.890	1.00	41.65
	atom	1992	C	LYS	254	35.086	21.430	-2.116	1.00	26.36
	atom	1993	O	LYS	254	34.540	20.417	-2.584	1.00	25.45
	atom	1994	N	SER	255	36.339	21.782	-2.373	1.00	22.67
	atom	1995	CA	SER	255	37.183	21.014	-3.265	1.00	24.60
	atom	1996	CB	SER	255	38.554	21.661	-3.377	1.00	21.10
	atom	1997	OG	SER	255	39.339	20.886	-4.257	1.00	30.13
	atom	1998	C	SER	255	37.358	19.537	-2.892	1.00	24.00
	atom	1999	O	SER	255	37.088	18.663	-3.717	1.00	26.22
	atom	2000	N	LEU	256	37.806	19.244	-1.670	1.00	17.87
	atom	2001	CA	LEU	256	37.999	17.845	-1.300	1.00	15.86
	atom	2002	CB	LEU	256	38.616	17.743	0.090	1.00	17.86
	atom	2003	CG	LEU	256	40.111	18.049	0.216	1.00	16.41

	atom	2004	CD1	LEU	256	40.332	19.003	1.379	1.00	17.04
	atom	2005	CD2	LEU	256	40.875	16.767	0.433	1.00	11.06
	atom	2006	C	LEU	256	36.667	17.086	-1.351	1.00	14.96
	atom	2007	O	LEU	256	36.605	15.903	-1.680	1.00	15.15
	atom	2008	N	THR	257	35.585	17.779	-1.039	1.00	13.93
	atom	2009	CA	THR	257	34.286	17.140	-1.069	1.00	11.09
	atom	2010	CB	THR	257	33.226	18.090	-0.594	1.00	7.33
	atom	2011	OG1	THR	257	33.472	18.388	0.774	1.00	15.97
	atom	2012	CG2	THR	257	31.845	17.488	-0.767	1.00	2.00
	atom	2013	C	THR	257	33.895	16.636	-2.457	1.00	12.20
	atom	2014	O	THR	257	33.488	15.491	-2.592	1.00	13.21
	atom	2015	N	GLU	258	34.014	17.497	-3.473	1.00	14.85
	atom	2016	CA	GLU	258	33.646	17.143	-4.854	1.00	16.89
	atom	2017	CB	GLU	258	33.411	18.395	-5.716	1.00	19.32
	atom	2018	CG	GLU	258	32.290	19.328	-5.275	1.00	15.38
	atom	2019	CD	GLU	258	30.936	18.965	-5.856	1.00	20.06
	atom	2020	OE1	GLU	258	29.933	19.633	-5.531	1.00	27.16
	atom	2021	OE2	GLU	258	30.858	18.009	-6.637	1.00	18.47
	atom	2022	C	GLU	258	34.706	16.297	-5.545	1.00	16.62
	atom	2023	O	GLU	258	34.406	15.593	-6.506	1.00	24.17
	atom	2024	N	ARG	259	35.931	16.338	-5.043	1.00	13.98
	atom	2025	CA	ARG	259	37.022	15.598	-5.660	1.00	15.72
	atom	2026	CB	ARG	259	38.294	16.431	-5.627	1.00	15.77
	atom	2027	CG	ARG	259	38.341	17.627	-6.585	1.00	17.24
	atom	2028	CD	ARG	259	39.685	17.593	-7.287	1.00	12.95
	atom	2029	NE	ARG	259	40.446	18.814	-7.198	1.00	18.01
	atom	2030	CZ	ARG	259	41.718	18.909	-7.578	1.00	22.61
	atom	2031	NH1	ARG	259	42.343	17.848	-8.074	1.00	17.11
	atom	2032	NH2	ARG	259	42.360	20.070	-7.484	1.00	25.72
	atom	2033	C	ARG	259	37.348	14.249	-5.054	1.00	15.73
	atom	2034	O	ARG	259	37.683	13.300	-5.757	1.00	16.02
	atom	2035	N	LEU	260	37.285	14.170	-3.737	1.00	18.52
	atom	2036	CA	LEU	260	37.626	12.939	-3.069	1.00	15.03
	atom	2037	CB	LEU	260	38.900	13.182	-2.279	1.00	15.86
	atom	2038	CG	LEU	260	39.389	12.270	-1.166	1.00	12.98
	atom	2039	CD1	LEU	260	40.359	11.255	-1.697	1.00	10.15

	atom	2040	CD2	LEU	260	40.040	13.152	-0.133	1.00	10.10
	atom	2041	C	LEU	260	36.522	12.342	-2.198	1.00	14.00
	atom	2042	O	LEU	260	36.189	11.181	-2.354	1.00	10.14
	atom	2043	N	TYR	261	35.942	13.133	-1.305	1.00	13.50
	atom	2044	CA	TYR	261	34.892	12.622	-0.418	1.00	15.87
	atom	2045	CB	TYR	261	34.433	13.729	0.545	1.00	12.68
	atom	2046	CG	TYR	261	35.548	14.204	1.461	1.00	10.77
	atom	2047	CD1	TYR	261	36.617	13.380	1.773	1.00	8.19
	atom	2048	CE1	TYR	261	37.650	13.834	2.583	1.00	13.15
	atom	2049	CD2	TYR	261	35.541	15.490	1.982	1.00	13.12
	atom	2050	CE2	TYR	261	36.559	15.943	2.777	1.00	12.85
	atom	2051	CZ	TYR	261	37.608	15.117	3.080	1.00	13.11
	atom	2052	OH	TYR	261	38.595	15.585	3.914	1.00	18.29
	atom	2053	C	TYR	261	33.688	12.024	-1.129	1.00	13.72
	atom	2054	O	TYR	261	33.235	10.937	-0.788	1.00	12.28
	atom	2055	N	ILE	262	33.186	12.737	-2.127	1.00	16.17
	atom	2056	CA	ILE	262	32.034	12.302	-2.899	1.00	17.13
	atom	2057	CB	ILE	262	31.614	13.431	-3.839	1.00	22.55
	atom	2058	CG2	ILE	262	31.698	12.991	-5.294	1.00	22.06
	atom	2059	CG1	ILE	262	30.221	13.914	-3.455	1.00	23.51
	atom	2060	CD1	ILE	262	30.252	15.039	-2.465	1.00	23.43
	atom	2061	C	ILE	262	32.280	11.021	-3.702	1.00	16.32
	atom	2062	O	ILE	262	31.360	10.260	-3.977	1.00	21.08
	atom	2063	N	GLY	263	33.523	10.776	-4.078	1.00	12.63
	atom	2064	CA	GLY	263	33.815	9.595	-4.856	1.00	11.89
	atom	2065	C	GLY	263	35.055	9.805	-5.708	1.00	14.39
	atom	2066	O	GLY	263	35.712	10.856	-5.605	1.00	12.47
	atom	2067	N	GLY	264	35.369	8.818	-6.551	1.00	11.02
	atom	2068	CA	GLY	264	36.544	8.913	-7.399	1.00	9.87
	atom	2069	C	GLY	264	37.026	7.558	-7.883	1.00	14.89
	atom	2070	O	GLY	264	36.451	6.532	-7.520	1.00	17.72
	atom	2071	N	PRO	265	38.070	7.524	-8.728	1.00	15.39
	atom	2072	CD	PRO	265	38.773	8.719	-9.232	1.00	19.54
	atom	2073	CA	PRO	265	38.650	6.300	-9.279	1.00	14.34
	atom	2074	CB	PRO	265	39.569	6.809	-10.397	1.00	14.57
	atom	2075	CG	PRO	265	39.958	8.141	-10.002	1.00	12.61

	atom	2076	C	PRO	265	39.421	5.471	-8.253	1.00	15.22
	atom	2077	O	PRO	265	40.060	6.019	-7.367	1.00	11.49
	atom	2078	N	LEU	266	39.382	4.150	-8.416	1.00	18.78
	atom	2079	CA	LEU	266	40.070	3.232	-7.516	1.00	18.58
	atom	2080	CB	LEU	266	39.090	2.155	-7.035	1.00	18.52
	atom	2081	CG	LEU	266	37.936	2.753	-6.215	1.00	21.73
	atom	2082	CD1	LEU	266	36.660	1.967	-6.449	1.00	14.44
	atom	2083	CD2	LEU	266	38.317	2.774	-4.726	1.00	19.12
	atom	2084	C	LEU	266	41.315	2.568	-8.117	1.00	17.83
	atom	2085	O	LEU	266	41.222	1.683	-8.948	1.00	12.29
	atom	2086	N	THR	267	42.490	2.982	-7.662	1.00	23.36
	atom	2087	CA	THR	267	43.727	2.404	-8.162	1.00	26.51
	atom	2088	CB	THR	267	44.727	3.523	-8.461	1.00	27.06
	atom	2089	OG1	THR	267	44.049	4.586	-9.147	1.00	24.26
	atom	2090	CG2	THR	267	45.878	2.998	-9.314	1.00	24.20
	atom	2091	C	THR	267	44.321	1.410	-7.143	1.00	28.90
	atom	2092	O	THR	267	44.301	1.675	-5.937	1.00	34.75
	atom	2093	N	ASN	268	44.833	0.272	-7.620	1.00	25.44
	atom	2094	CA	ASN	268	45.422	-0.731	-6.731	1.00	26.72
	atom	2095	CB	ASN	268	45.278	-2.136	-7.341	1.00	27.28
	atom	2096	CG	ASN	268	46.115	-2.332	-8.588	1.00	27.26
	atom	2097	OD1	ASN	268	47.124	-1.667	-8.790	1.00	30.81
	atom	2098	ND2	ASN	268	45.695	-3.254	-9.431	1.00	25.21
	atom	2099	C	ASN	268	46.890	-0.438	-6.378	1.00	26.40
	atom	2100	O	ASN	268	47.397	0.637	-6.678	1.00	26.91
	atom	2101	N	SER	269	47.572	-1.376	-5.726	1.00	27.44
	atom	2102	CA	SER	269	48.979	-1.148	-5.365	1.00	28.35
	atom	2103	CB	SER	269	49.499	-2.250	-4.418	1.00	26.08
	atom	2104	OG	SER	269	49.152	-3.554	-4.863	1.00	26.38
	atom	2105	C	SER	269	49.899	-1.053	-6.592	1.00	28.67
	atom	2106	O	SER	269	50.922	-0.352	-6.566	1.00	25.24
	atom	2107	N	LYS	270	49.520	-1.737	-7.667	1.00	28.92
	atom	2108	CA	LYS	270	50.312	-1.734	-8.898	1.00	35.18
	atom	2109	CB	LYS	270	50.391	-3.146	-9.461	1.00	39.30
	atom	2110	CG	LYS	270	49.842	-4.184	-8.501	1.00	43.36
	atom	2111	CD	LYS	270	50.961	-4.975	-7.864	1.00	43.04

	atom	2112	CE	LYS	270	50.923	-6.395	-8.374	1.00	45.41
	atom	2113	NZ	LYS	270	49.689	-6.660	-9.167	1.00	45.41
	atom	2114	C	LYS	270	49.786	-0.803	-9.980	1.00	33.81
	atom	2115	O	LYS	270	49.693	-1.197	-11.139	1.00	33.83
	atom	2116	N	GLY	271	49.435	0.421	-9.584	1.00	32.68
	atom	2117	CA	GLY	271	48.936	1.423	-10.510	1.00	27.64
	atom	2118	C	GLY	271	47.772	1.115	-11.447	1.00	26.39
	atom	2119	O	GLY	271	47.358	2.012	-12.188	1.00	30.24
	atom	2120	N	GLN	272	47.244	-0.105	-11.451	1.00	17.32
	atom	2121	CA	GLN	272	46.120	-0.427	-12.325	1.00	22.25
	atom	2122	CB	GLN	272	45.986	-1.945	-12.461	1.00	24.61
	atom	2123	CG	GLN	272	45.077	-2.428	-13.592	1.00	27.62
	atom	2124	CD	GLN	272	44.970	-3.948	-13.620	1.00	30.83
	atom	2125	OE1	GLN	272	44.286	-4.548	-14.465	1.00	32.24
	atom	2126	NE2	GLN	272	45.654	-4.581	-12.685	1.00	29.65
	atom	2127	C	GLN	272	44.814	0.178	-11.775	1.00	26.21
	atom	2128	O	GLN	272	44.733	0.523	-10.588	1.00	29.01
	atom	2129	N	ASN	273	43.792	0.309	-12.625	1.00	25.46
	atom	2130	CA	ASN	273	42.513	0.896	-12.198	1.00	23.73
	atom	2131	CB	ASN	273	42.019	1.881	-13.264	1.00	30.12
	atom	2132	CG	ASN	273	40.879	2.757	-12.770	1.00	37.83
	atom	2133	OD1	ASN	273	39.722	2.596	-13.193	1.00	37.42
	atom	2134	ND2	ASN	273	41.195	3.691	-11.867	1.00	35.00
	atom	2135	C	ASN	273	41.463	-0.177	-11.916	1.00	23.49
	atom	2136	O	ASN	273	41.189	-1.029	-12.757	1.00	25.71
	atom	2137	N	CYS	274	40.850	-0.121	-10.739	1.00	23.80
	atom	2138	CA	CYS	274	39.888	-1.148	-10.319	1.00	25.70
	atom	2139	CB	CYS	274	40.167	-1.541	-8.861	1.00	25.88
	atom	2140	SG	CYS	274	41.669	-2.486	-8.608	1.00	33.34
	atom	2141	C	CYS	274	38.398	-0.867	-10.444	1.00	25.85
	atom	2142	O	CYS	274	37.577	-1.804	-10.457	1.00	27.72
	atom	2143	N	GLY	275	38.038	0.407	-10.517	1.00	23.71
	atom	2144	CA	GLY	275	36.633	0.742	-10.605	1.00	16.81
	atom	2145	C	GLY	275	36.419	2.141	-10.091	1.00	18.46
	atom	2146	O	GLY	275	37.371	2.891	-9.897	1.00	18.71
	atom	2147	N	TYR	276	35.165	2.498	-9.866	1.00	20.06

atom	2148	CA	TYR	276	34.836	3.818	-9.384	1.00	17.87
atom	2149	CB	TYR	276	34.066	4.576	-10.454	1.00	18.27
atom	2150	CG	TYR	276	34.228	6.061	-10.360	1.00	20.59
atom	2151	CD1	TYR	276	35.406	6.670	-10.772	1.00	22.34
atom	2152	CE1	TYR	276	35.576	8.038	-10.668	1.00	19.43
atom	2153	CD2	TYR	276	33.214	6.865	-9.838	1.00	15.56
atom	2154	CE2	TYR	276	33.377	8.234	-9.732	1.00	11.70
atom	2155	CZ	TYR	276	34.564	8.812	-10.151	1.00	17.31
atom	2156	OH	TYR	276	34.746	10.176	-10.087	1.00	23.54
atom	2157	C	TYR	276	34.018	3.748	-8.107	1.00	22.08
atom	2158	O	TYR	276	33.156	2.860	-7.943	1.00	17.02
atom	2159	N	ARG	277	34.291	4.710	-7.218	1.00	21.89
atom	2160	CA	ARG	277	33.624	4.811	-5.915	1.00	18.88
atom	2161	CB	ARG	277	34.671	4.996	-4.821	1.00	16.44
atom	2162	CG	ARG	277	34.100	5.251	-3.454	1.00	12.85
atom	2163	CD	ARG	277	35.221	5.452	-2.447	1.00	12.71
atom	2164	NE	ARG	277	35.364	6.862	-2.167	1.00	11.61
atom	2165	CZ	ARG	277	36.301	7.623	-2.695	1.00	14.30
atom	2166	NH1	ARG	277	37.191	7.105	-3.537	1.00	19.41
atom	2167	NH2	ARG	277	36.309	8.913	-2.425	1.00	13.75
atom	2168	C	ARG	277	32.605	5.949	-5.818	1.00	16.05
atom	2169	O	ARG	277	32.883	7.072	-6.230	1.00	13.24
atom	2170	N	ARG	278	31.436	5.648	-5.258	1.00	12.45
atom	2171	CA	ARG	278	30.383	6.649	-5.091	1.00	18.18
atom	2172	CB	ARG	278	29.260	6.405	-6.101	1.00	18.80
atom	2173	CG	ARG	278	29.611	6.820	-7.524	1.00	28.39
atom	2174	CD	ARG	278	28.597	6.291	-8.540	1.00	33.08
atom	2175	NE	ARG	278	28.868	6.784	-9.888	1.00	41.53
atom	2176	CZ	ARG	278	29.324	6.028	-10.888	1.00	48.03
atom	2177	NH1	ARG	278	29.561	4.730	-10.697	1.00	44.88
atom	2178	NH2	ARG	278	29.535	6.572	-12.085	1.00	46.94
atom	2179	C	ARG	278	29.799	6.692	-3.663	1.00	19.30
atom	2180	O	ARG	278	28.795	7.360	-3.405	1.00	15.36
atom	2181	N	CYS	279	30.428	5.966	-2.744	1.00	19.64
atom	2182	CA	CYS	279	29.991	5.935	-1.353	1.00	20.90
atom	2183	CB	CYS	279	29.726	4.508	-0.883	1.00	14.51

	atom	2184	SG	CYS	279	31.005	3.386	-1.424	1.00	15.44
	atom	2185	C	CYS	279	31.138	6.521	-0.576	1.00	20.88
	atom	2186	O	CYS	279	31.974	7.210	-1.144	1.00	20.24
	atom	2187	N	ARG	280	31.191	6.241	0.718	1.00	21.43
	atom	2188	CA	ARG	280	32.264	6.789	1.533	1.00	20.68
	atom	2189	CB	ARG	280	31.747	7.020	2.961	1.00	19.31
	atom	2190	CG	ARG	280	32.575	6.415	4.048	1.00	18.15
	atom	2191	CD	ARG	280	32.867	7.406	5.162	1.00	21.04
	atom	2192	NE	ARG	280	32.647	8.804	4.804	1.00	12.69
	atom	2193	CZ	ARG	280	31.545	9.505	5.086	1.00	15.55
	atom	2194	NH1	ARG	280	30.532	8.955	5.728	1.00	11.45
	atom	2195	NH2	ARG	280	31.465	10.784	4.738	1.00	17.13
	atom	2196	C	ARG	280	33.521	5.924	1.531	1.00	18.90
	atom	2197	O	ARG	280	33.447	4.702	1.553	1.00	17.78
	atom	2198	N	ALA	281	34.672	6.586	1.476	1.00	21.26
	atom	2199	CA	ALA	281	35.972	5.918	1.510	1.00	21.34
	atom	2200	CB	ALA	281	37.025	6.745	0.756	1.00	18.60
	atom	2201	C	ALA	281	36.376	5.787	2.979	1.00	21.26
	atom	2202	O	ALA	281	36.195	6.714	3.763	1.00	18.25
	atom	2203	N	SER	282	36.946	4.641	3.335	1.00	23.57
	atom	2204	CA	SER	282	37.362	4.382	4.703	1.00	24.39
	atom	2205	CB	SER	282	37.542	2.888	4.899	1.00	27.34
	atom	2206	OG	SER	282	38.797	2.498	4.380	1.00	32.15
	atom	2207	C	SER	282	38.639	5.077	5.166	1.00	22.43
	atom	2208	O	SER	282	38.854	5.241	6.363	1.00	23.50
	atom	2209	N	GLY	283	39.489	5.483	4.235	1.00	21.76
	atom	2210	CA	GLY	283	40.744	6.106	4.638	1.00	15.46
	atom	2211	C	GLY	283	40.880	7.600	4.565	1.00	13.85
	atom	2212	O	GLY	283	42.004	8.118	4.479	1.00	19.21
	atom	2213	N	VAL	284	39.762	8.310	4.616	1.00	13.00
	atom	2214	CA	VAL	284	39.800	9.769	4.541	1.00	15.56
	atom	2215	CB	VAL	284	38.679	10.304	3.620	1.00	16.97
	atom	2216	CG1	VAL	284	39.262	10.613	2.241	1.00	15.44
	atom	2217	CG2	VAL	284	37.547	9.285	3.530	1.00	14.19
	atom	2218	C	VAL	284	39.670	10.362	5.931	1.00	15.54
	atom	2219	O	VAL	284	39.303	9.658	6.860	1.00	19.80

	atom	2220	N	LEU	285	39.968	11.647	6.091	1.00	13.93
	atom	2221	CA	LEU	285	39.908	12.256	7.429	1.00	17.74
	atom	2222	CB	LEU	285	40.603	13.632	7.427	1.00	12.72
	atom	2223	CG	LEU	285	40.682	14.208	8.854	1.00	13.97
	atom	2224	CD1	LEU	285	41.583	13.335	9.677	1.00	10.92
	atom	2225	CD2	LEU	285	41.205	15.617	8.874	1.00	11.60
	atom	2226	C	LEU	285	38.499	12.423	8.015	1.00	18.40
	atom	2227	O	LEU	285	38.280	12.281	9.227	1.00	19.46
	atom	2228	N	THR	286	37.560	12.749	7.134	1.00	17.13
	atom	2229	CA	THR	286	36.174	13.003	7.480	1.00	9.25
	atom	2230	CB	THR	286	35.499	13.868	6.383	1.00	13.12
	atom	2231	OG1	THR	286	35.815	13.304	5.106	1.00	12.04
	atom	2232	CG2	THR	286	35.978	15.332	6.425	1.00	5.20
	atom	2233	C	THR	286	35.346	11.735	7.615	1.00	9.11
	atom	2234	O	THR	286	34.152	11.815	7.896	1.00	8.03
	atom	2235	N	THR	287	35.946	10.562	7.452	1.00	10.18
	atom	2236	CA	THR	287	35.103	9.369	7.509	1.00	14.14
	atom	2237	CB	THR	287	35.826	8.109	6.947	1.00	10.87
	atom	2238	OG1	THR	287	35.253	6.932	7.513	1.00	16.44
	atom	2239	CG2	THR	287	37.274	8.138	7.226	1.00	14.10
	atom	2240	C	THR	287	34.467	9.098	8.867	1.00	14.16
	atom	2241	O	THR	287	33.294	8.697	8.947	1.00	16.05
	atom	2242	N	SER	288	35.220	9.343	9.930	1.00	15.91
	atom	2243	CA	SER	288	34.698	9.157	11.290	1.00	15.33
	atom	2244	CB	SER	288	35.814	9.355	12.308	1.00	14.21
	atom	2245	OG	SER	288	35.292	9.200	13.588	1.00	17.12
	atom	2246	C	SER	288	33.607	10.189	11.573	1.00	13.18
	atom	2247	O	SER	288	32.450	9.851	11.817	1.00	12.64
	atom	2248	N	CYS	289	33.996	11.455	11.534	1.00	7.93
	atom	2249	CA	CYS	289	33.069	12.534	11.789	1.00	11.47
	atom	2250	CB	CYS	289	33.829	13.862	11.743	1.00	9.05
	atom	2251	SG	CYS	289	32.818	15.296	11.468	1.00	23.99
	atom	2252	C	CYS	289	31.865	12.539	10.826	1.00	13.05
	atom	2253	O	CYS	289	30.738	12.839	11.230	1.00	15.52
	atom	2254	N	GLY	290	32.107	12.221	9.556	1.00	13.75
	atom	2255	CA	GLY	290	31.028	12.171	8.585	1.00	9.52

	atom	2256	C	GLY	290	30.030	11.078	8.936	1.00	14.00
	atom	2257	O	GLY	290	28.826	11.330	9.001	1.00	13.98
	atom	2258	N	ASN	291	30.517	9.862	9.175	1.00	11.72
	atom	2259	CA	ASN	291	29.632	8.749	9.522	1.00	14.59
	atom	2260	CB	ASN	291	30.431	7.455	9.708	1.00	14.95
	atom	2261	CG	ASN	291	30.768	6.792	8.401	1.00	17.83
	atom	2262	OD1	ASN	291	30.452	7.308	7.339	1.00	20.08
	atom	2263	ND2	ASN	291	31.416	5.645	8.470	1.00	14.87
	atom	2264	C	ASN	291	28.841	9.026	10.799	1.00	15.00
	atom	2265	O	ASN	291	27.666	8.694	10.879	1.00	16.58
	atom	2266	N	THR	292	29.494	9.621	11.796	1.00	14.32
	atom	2267	CA	THR	292	28.822	9.930	13.042	1.00	12.05
	atom	2268	CB	THR	292	29.808	10.438	14.096	1.00	11.72
	atom	2269	OG1	THR	292	30.914	9.522	14.200	1.00	10.62
	atom	2270	CG2	THR	292	29.119	10.522	15.431	1.00	2.84
	atom	2271	C	THR	292	27.712	10.951	12.838	1.00	12.80
	atom	2272	O	THR	292	26.591	10.762	13.327	1.00	9.57
	atom	2273	N	LEU	293	28.015	12.006	12.085	1.00	9.15
	atom	2274	CA	LEU	293	27.032	13.049	11.788	1.00	12.82
	atom	2275	CB	LEU	293	27.701	14.202	11.033	1.00	9.78
	atom	2276	CG	LEU	293	28.398	15.199	11.965	1.00	18.62
	atom	2277	CD1	LEU	293	29.546	15.895	11.253	1.00	16.21
	atom	2278	CD2	LEU	293	27.381	16.215	12.475	1.00	17.80
	atom	2279	C	LEU	293	25.862	12.511	10.947	1.00	13.27
	atom	2280	O	LEU	293	24.682	12.842	11.168	1.00	11.94
	atom	2281	N	THR	294	26.201	11.663	9.990	1.00	11.34
	atom	2282	CA	THR	294	25.206	11.101	9.096	1.00	14.42
	atom	2283	CB	THR	294	25.924	10.507	7.853	1.00	18.24
	atom	2284	OG1	THR	294	26.579	11.578	7.152	1.00	10.12
	atom	2285	CG2	THR	294	24.937	9.774	6.916	1.00	13.84
	atom	2286	C	THR	294	24.304	10.070	9.791	1.00	14.01
	atom	2287	O	THR	294	23.078	10.116	9.643	1.00	12.11
	atom	2288	N	CYS	295	24.904	9.173	10.568	1.00	12.63
	atom	2289	CA	CYS	295	24.136	8.159	11.282	1.00	15.63
	atom	2290	CB	CYS	295	25.071	7.211	12.036	1.00	16.08
	atom	2291	SG	CYS	295	24.257	5.881	12.935	1.00	21.79

	atom	2292	C	CYS	295	23.213	8.854	12.263	1.00	15.43
	atom	2293	O	CYS	295	22.094	8.435	12.481	1.00	19.23
	atom	2294	N	TYR	296	23.699	9.939	12.842	1.00	16.92
	atom	2295	CA	TYR	296	22.936	10.690	13.806	1.00	14.43
5	atom	2296	CB	TYR	296	23.825	11.751	14.456	1.00	19.59
	atom	2297	CG	TYR	296	23.090	12.746	15.343	1.00	23.57
	atom	2298	CD1	TYR	296	23.020	12.566	16.722	1.00	20.83
	atom	2299	CE1	TYR	296	22.301	13.445	17.524	1.00	22.97
	atom	2300	CD2	TYR	296	22.430	13.843	14.788	1.00	23.20
10	atom	2301	CE2	TYR	296	21.711	14.717	15.575	1.00	25.26
	atom	2302	CZ	TYR	296	21.645	14.520	16.941	1.00	26.53
	atom	2303	OH	TYR	296	20.895	15.395	17.699	1.00	29.76
	atom	2304	C	TYR	296	21.726	11.337	13.170	1.00	14.11
	atom	2305	O	TYR	296	20.625	11.274	13.697	1.00	19.65
15	atom	2306	N	LEU	297	21.939	11.957	12.023	1.00	15.89
	atom	2307	CA	LEU	297	20.878	12.651	11.313	1.00	8.94
	atom	2308	CB	LEU	297	21.500	13.424	10.160	1.00	5.24
	atom	2309	CG	LEU	297	20.678	13.851	8.964	1.00	5.83
	atom	2310	CD1	LEU	297	19.580	14.775	9.444	1.00	2.22
20	atom	2311	CD2	LEU	297	21.629	14.533	7.916	1.00	2.00
	atom	2312	C	LEU	297	19.803	11.689	10.837	1.00	10.39
	atom	2313	O	LEU	297	18.616	11.957	10.972	1.00	8.02
	atom	2314	N	LYS	298	20.216	10.549	10.303	1.00	9.68
	atom	2315	CA	LYS	298	19.246	9.581	9.838	1.00	14.27
25	atom	2316	CB	LYS	298	19.946	8.509	8.983	1.00	12.89
	atom	2317	CG	LYS	298	20.246	8.983	7.551	1.00	12.25
	atom	2318	CD	LYS	298	21.078	7.973	6.751	1.00	6.41
	atom	2319	CE	LYS	298	22.027	8.688	5.810	1.00	4.84
	atom	2320	NZ	LYS	298	22.489	7.757	4.743	1.00	10.05
30	atom	2321	C	LYS	298	18.503	8.927	11.019	1.00	17.59
	atom	2322	O	LYS	298	17.277	8.715	10.972	1.00	15.32
	atom	2323	N	ALA	299	19.247	8.619	12.082	1.00	13.97
	atom	2324	CA	ALA	299	18.652	7.968	13.224	1.00	16.65
	atom	2325	CB	ALA	299	19.730	7.435	14.138	1.00	13.48
35	atom	2326	C	ALA	299	17.725	8.926	13.966	1.00	18.16
	atom	2327	O	ALA	299	16.701	8.516	14.513	1.00	18.52

	atom	2328	N	SER	300	18.063	10.208	13.958	1.00	17.35
	atom	2329	CA	SER	300	17.228	11.185	14.646	1.00	18.66
	atom	2330	CB	SER	300	17.904	12.544	14.666	1.00	15.49
	atom	2331	OG	SER	300	18.797	12.616	15.742	1.00	18.28
	atom	2332	C	SER	300	15.889	11.304	13.940	1.00	16.51
	atom	2333	O	SER	300	14.831	11.166	14.558	1.00	15.45
	atom	2334	N	ALA	301	15.957	11.564	12.637	1.00	15.39
	atom	2335	CA	ALA	301	14.770	11.692	11.814	1.00	12.42
	atom	2336	CB	ALA	301	15.163	12.082	10.377	1.00	15.24
	atom	2337	C	ALA	301	14.034	10.365	11.840	1.00	5.80
	atom	2338	O	ALA	301	12.819	10.316	11.851	1.00	7.66
	atom	2339	N	ALA	302	14.766	9.271	11.872	1.00	9.55
	atom	2340	CA	ALA	302	14.096	7.986	11.929	1.00	9.80
	atom	2341	CB	ALA	302	15.090	6.886	11.658	1.00	2.00
	atom	2342	C	ALA	302	13.360	7.757	13.284	1.00	13.62
	atom	2343	O	ALA	302	12.317	7.107	13.315	1.00	10.82
	atom	2344	N	CYS	303	13.900	8.287	14.388	1.00	18.85
	atom	2345	CA	CYS	303	13.279	8.154	15.722	1.00	23.51
	atom	2346	CB	CYS	303	14.200	8.744	16.808	1.00	22.96
	atom	2347	SG	CYS	303	15.543	7.661	17.396	1.00	27.82
	atom	2348	C	CYS	303	11.929	8.909	15.742	1.00	25.77
	atom	2349	O	CYS	303	10.908	8.411	16.244	1.00	24.54
	atom	2350	N	ARG	304	11.945	10.118	15.187	1.00	23.30
	atom	2351	CA	ARG	304	10.765	10.939	15.110	1.00	22.77
	atom	2352	CB	ARG	304	11.124	12.303	14.515	1.00	25.79
	atom	2353	CG	ARG	304	12.196	13.087	15.297	1.00	17.91
	atom	2354	CD	ARG	304	12.183	14.574	14.935	1.00	16.51
	atom	2355	NE	ARG	304	13.295	15.328	15.528	1.00	19.54
	atom	2356	CZ	ARG	304	13.479	16.643	15.382	1.00	22.18
	atom	2357	NH1	ARG	304	12.623	17.360	14.654	1.00	24.97
	atom	2358	NH2	ARG	304	14.495	17.259	15.988	1.00	11.47
	atom	2359	C	ARG	304	9.686	10.237	14.271	1.00	27.22
	atom	2360	O	ARG	304	8.491	10.401	14.526	1.00	26.21
	atom	2361	N	ALA	305	10.096	9.451	13.276	1.00	30.09
	atom	2362	CA	ALA	305	9.128	8.722	12.446	1.00	33.45
	atom	2363	CB	ALA	305	9.848	7.850	11.418	1.00	34.06

	atom	2364	C	ALA	305	8.206	7.851	13.309	1.00	35.38
	atom	2365	O	ALA	305	7.174	7.366	12.834	1.00	35.39
	atom	2366	N	ALA	306	8.577	7.663	14.576	1.00	35.87
	atom	2367	CA	ALA	306	7.765	6.873	15.502	1.00	34.64
	atom	2368	CB	ALA	306	8.351	5.488	15.637	1.00	32.18
	atom	2369	C	ALA	306	7.680	7.539	16.879	1.00	36.85
	atom	2370	O	ALA	306	6.838	8.406	17.129	1.00	36.36
	atom	2371	N	LYS	307	8.574	7.101	17.757	1.00	39.04
	atom	2372	CA	LYS	307	8.706	7.559	19.130	1.00	40.94
	atom	2373	CB	LYS	307	10.180	7.532	19.532	1.00	38.95
	atom	2374	CG	LYS	307	10.708	6.161	19.923	1.00	36.86
	atom	2375	CD	LYS	307	10.494	5.111	18.857	1.00	36.71
	atom	2376	CE	LYS	307	11.795	4.384	18.558	1.00	36.71
	atom	2377	NZ	LYS	307	12.854	5.374	18.227	1.00	33.42
	atom	2378	C	LYS	307	8.133	8.923	19.519	1.00	46.84
	atom	2379	O	LYS	307	8.751	9.974	19.267	1.00	44.29
	atom	2380	N	LEU	308	6.960	8.885	20.160	1.00	48.04
	atom	2381	CA	LEU	308	6.277	10.074	20.657	1.00	48.37
	atom	2382	CB	LEU	308	4.753	9.878	20.601	1.00	48.94
	atom	2383	CG	LEU	308	4.173	8.460	20.775	1.00	49.31
	atom	2384	CD1	LEU	308	3.710	8.256	22.227	1.00	44.27
	atom	2385	CD2	LEU	308	3.015	8.241	19.782	1.00	41.39
	atom	2386	C	LEU	308	6.741	10.177	22.106	1.00	51.94
	atom	2387	O	LEU	308	6.232	10.976	22.906	1.00	54.73
	atom	2388	N	GLN	309	7.731	9.341	22.412	1.00	53.82
	atom	2389	CA	GLN	309	8.343	9.215	23.733	1.00	50.51
	atom	2390	CB	GLN	309	8.692	7.753	23.971	1.00	49.33
	atom	2391	CG	GLN	309	9.081	7.057	22.688	1.00	43.60
	atom	2392	CD	GLN	309	8.482	5.684	22.576	1.00	46.55
	atom	2393	OE1	GLN	309	8.852	4.904	21.702	1.00	48.64
	atom	2394	NE2	GLN	309	7.546	5.371	23.465	1.00	52.26
	atom	2395	C	GLN	309	9.605	10.063	23.894	1.00	50.23
	atom	2396	O	GLN	309	9.679	11.188	23.385	1.00	51.70
	atom	2397	N	ASP	310	10.607	9.505	24.574	1.00	45.60
	atom	2398	CA	ASP	310	11.842	10.241	24.843	1.00	45.61
	atom	2399	CB	ASP	310	11.857	10.677	26.311	1.00	49.55

	atom	2400	CG	ASP	310	10.477	10.576	26.957	1.00	52.52
	atom	2401	OD1	ASP	310	10.126	9.472	27.425	1.00	55.31
	atom	2402	OD2	ASP	310	9.738	11.591	26.987	1.00	50.43
	atom	2403	C	ASP	310	13.094	9.447	24.513	1.00	43.42
5	atom	2404	O	ASP	310	13.609	8.664	25.322	1.00	36.39
	atom	2405	N	CYS	311	13.576	9.683	23.300	1.00	41.94
	atom	2406	CA	CYS	311	14.742	9.005	22.779	1.00	36.84
	atom	2407	CB	CYS	311	14.743	9.068	21.260	1.00	36.81
	atom	2408	SG	CYS	311	13.637	7.907	20.518	1.00	42.36
10	atom	2409	C	CYS	311	16.006	9.626	23.290	1.00	33.20
	atom	2410	O	CYS	311	16.045	10.805	23.622	1.00	33.83
	atom	2411	N	THR	312	17.040	8.805	23.363	1.00	30.22
	atom	2412	CA	THR	312	18.349	9.252	23.787	1.00	25.44
	atom	2413	CB	THR	312	18.536	9.164	25.325	1.00	23.85
15	atom	2414	OG1	THR	312	18.011	10.349	25.925	1.00	22.46
	atom	2415	CG2	THR	312	20.012	9.068	25.685	1.00	10.21
	atom	2416	C	THR	312	19.274	8.299	23.090	1.00	20.56
	atom	2417	O	THR	312	19.186	7.083	23.267	1.00	21.46
	atom	2418	N	MET	313	20.144	8.845	22.263	1.00	20.54
20	atom	2419	CA	MET	313	21.067	7.997	21.545	1.00	19.27
	atom	2420	CB	MET	313	20.777	8.029	20.056	1.00	25.79
	atom	2421	CG	MET	313	20.399	9.373	19.503	1.00	32.07
	atom	2422	SD	MET	313	19.838	9.178	17.802	1.00	38.75
	atom	2423	CE	MET	313	19.136	7.556	17.863	1.00	39.44
25	atom	2424	C	MET	313	22.510	8.343	21.771	1.00	14.50
	atom	2425	O	MET	313	22.856	9.436	22.207	1.00	9.75
	atom	2426	N	LEU	314	23.353	7.373	21.466	1.00	13.82
	atom	2427	CA	LEU	314	24.779	7.527	21.610	1.00	13.35
	atom	2428	CB	LEU	314	25.262	6.608	22.723	1.00	16.95
30	atom	2429	CG	LEU	314	26.685	6.770	23.224	1.00	14.63
	atom	2430	CD1	LEU	314	26.856	8.096	23.963	1.00	17.88
	atom	2431	CD2	LEU	314	26.953	5.633	24.125	1.00	13.14
	atom	2432	C	LEU	314	25.236	7.035	20.271	1.00	14.24
	atom	2433	O	LEU	314	24.842	5.953	19.860	1.00	15.54
35	atom	2434	N	VAL	315	26.043	7.830	19.583	1.00	15.56
	atom	2435	CA	VAL	315	26.505	7.497	18.237	1.00	9.88

	atom	2436	CB	VAL	315	25.935	8.523	17.203	1.00	11.20
	atom	2437	CG1	VAL	315	26.161	8.034	15.771	1.00	7.03
	atom	2438	CG2	VAL	315	24.464	8.761	17.480	1.00	8.43
	atom	2439	C	VAL	315	28.011	7.497	18.105	1.00	8.96
	atom	2440	O	VAL	315	28.677	8.456	18.462	1.00	11.80
	atom	2441	N	ASN	316	28.544	6.417	17.568	1.00	14.06
	atom	2442	CA	ASN	316	29.986	6.287	17.344	1.00	17.17
	atom	2443	CB	ASN	316	30.578	5.230	18.288	1.00	19.30
	atom	2444	CG	ASN	316	30.707	5.721	19.716	1.00	17.92
	atom	2445	OD1	ASN	316	31.816	5.815	20.239	1.00	22.60
	atom	2446	ND2	ASN	316	29.585	6.028	20.354	1.00	10.96
	atom	2447	C	ASN	316	30.142	5.842	15.877	1.00	16.01
	atom	2448	O	ASN	316	30.046	4.655	15.574	1.00	14.74
	atom	2449	N	GLY	317	30.368	6.802	14.978	1.00	16.57
	atom	2450	CA	GLY	317	30.476	6.481	13.565	1.00	17.40
	atom	2451	C	GLY	317	29.171	5.821	13.135	1.00	19.47
	atom	2452	O	GLY	317	28.110	6.446	13.205	1.00	14.77
	atom	2453	N	ASP	318	29.244	4.551	12.727	1.00	20.90
	atom	2454	CA	ASP	318	28.067	3.790	12.299	1.00	22.65
	atom	2455	CB	ASP	318	28.474	2.759	11.263	1.00	23.74
	atom	2456	CG	ASP	318	29.705	2.002	11.671	1.00	25.46
	atom	2457	OD1	ASP	318	30.734	2.651	11.970	1.00	27.87
	atom	2458	OD2	ASP	318	29.641	0.763	11.698	1.00	26.03
	atom	2459	C	ASP	318	27.400	3.063	13.469	1.00	25.05
	atom	2460	O	ASP	318	26.242	2.637	13.383	1.00	21.88
	atom	2461	N	ASP	319	28.142	2.888	14.555	1.00	26.67
	atom	2462	CA	ASP	319	27.575	2.215	15.721	1.00	26.70
	atom	2463	CB	ASP	319	28.678	1.802	16.677	1.00	28.58
	atom	2464	CG	ASP	319	28.912	0.318	16.660	1.00	33.32
	atom	2465	OD1	ASP	319	30.066	-0.088	16.411	1.00	38.53
	atom	2466	OD2	ASP	319	27.944	-0.441	16.895	1.00	32.80
	atom	2467	C	ASP	319	26.561	3.111	16.433	1.00	20.68
	atom	2468	O	ASP	319	26.825	4.276	16.727	1.00	16.01
	atom	2469	N	LEU	320	25.391	2.564	16.696	1.00	17.24
	atom	2470	CA	LEU	320	24.360	3.348	17.349	1.00	18.39
	atom	2471	CB	LEU	320	23.433	3.989	16.297	1.00	15.89

	atom	2472	CG	LEU	320	22.116	4.618	16.790	1.00	12.18
	atom	2473	CD1	LEU	320	22.178	6.132	16.762	1.00	10.98
	atom	2474	CD2	LEU	320	21.004	4.146	15.961	1.00	14.11
	atom	2475	C	LEU	320	23.517	2.538	18.320	1.00	18.66
	atom	2476	O	LEU	320	23.168	1.393	18.065	1.00	22.48
	atom	2477	N	VAL	321	23.217	3.150	19.451	1.00	18.77
	atom	2478	CA	VAL	321	22.348	2.554	20.447	1.00	21.37
	atom	2479	CB	VAL	321	23.139	1.998	21.665	1.00	20.14
	atom	2480	CG1	VAL	321	24.229	2.955	22.055	1.00	16.69
	atom	2481	CG2	VAL	321	22.193	1.751	22.825	1.00	21.87
	atom	2482	C	VAL	321	21.432	3.695	20.887	1.00	20.58
	atom	2483	O	VAL	321	21.846	4.856	20.919	1.00	21.70
	atom	2484	N	VAL	322	20.179	3.376	21.181	1.00	22.46
	atom	2485	CA	VAL	322	19.228	4.388	21.629	1.00	20.67
	atom	2486	CB	VAL	322	18.321	4.927	20.459	1.00	18.69
	atom	2487	CG1	VAL	322	18.563	4.152	19.184	1.00	21.89
	atom	2488	CG2	VAL	322	16.858	4.879	20.848	1.00	10.07
	atom	2489	C	VAL	322	18.359	3.791	22.718	1.00	23.42
	atom	2490	O	VAL	322	17.892	2.656	22.601	1.00	22.75
	atom	2491	N	ILE	323	18.173	4.547	23.797	1.00	24.20
	atom	2492	CA	ILE	323	17.346	4.086	24.902	1.00	24.58
	atom	2493	CB	ILE	323	18.138	4.118	26.208	1.00	21.51
	atom	2494	CG2	ILE	323	17.233	3.756	27.390	1.00	21.90
	atom	2495	CG1	ILE	323	19.299	3.136	26.092	1.00	16.19
	atom	2496	CD1	ILE	323	20.416	3.399	27.052	1.00	15.59
	atom	2497	C	ILE	323	16.128	4.999	24.972	1.00	25.11
	atom	2498	O	ILE	323	16.254	6.224	24.907	1.00	24.98
	atom	2499	N	CYS	324	14.949	4.406	25.086	1.00	23.55
	atom	2500	CA	CYS	324	13.727	5.197	25.118	1.00	27.73
	atom	2501	CB	CYS	324	13.163	5.310	23.701	1.00	23.61
	atom	2502	SG	CYS	324	12.642	3.714	23.071	1.00	23.47
	atom	2503	C	CYS	324	12.682	4.555	26.025	1.00	30.59
	atom	2504	O	CYS	324	12.920	3.486	26.613	1.00	33.18
	atom	2505	N	GLU	325	11.526	5.213	26.137	1.00	31.53
	atom	2506	CA	GLU	325	10.430	4.686	26.947	1.00	31.88
	atom	2507	CB	GLU	325	9.331	5.738	27.095	1.00	30.67

	atom	2508	CG	GLU	325	9.530	6.721	28.242	1.00	36.94
	atom	2509	CD	GLU	325	9.992	6.070	29.555	1.00	38.18
	atom	2510	OE1	GLU	325	9.612	4.912	29.845	1.00	39.61
	atom	2511	OE2	GLU	325	10.743	6.730	30.303	1.00	39.29
	atom	2512	C	GLU	325	9.849	3.444	26.262	1.00	30.60
	atom	2513	O	GLU	325	10.075	3.222	25.071	1.00	30.40
	atom	2514	N	SER	326	9.118	2.618	26.999	1.00	28.03
	atom	2515	CA	SER	326	8.513	1.459	26.363	1.00	26.05
	atom	2516	CB	SER	326	8.843	0.160	27.089	1.00	29.11
	atom	2517	OG	SER	326	8.617	-0.965	26.247	1.00	26.53
	atom	2518	C	SER	326	7.030	1.669	26.378	1.00	27.99
	atom	2519	O	SER	326	6.521	2.464	27.158	1.00	24.18
	atom	2520	N	ALA	327	6.338	0.975	25.484	1.00	31.30
	atom	2521	CA	ALA	327	4.891	1.084	25.390	1.00	30.56
	atom	2522	CB	ALA	327	4.500	1.931	24.203	1.00	32.50
	atom	2523	C	ALA	327	4.390	-0.317	25.209	1.00	32.97
	atom	2524	O	ALA	327	3.327	-0.538	24.625	1.00	35.03
	atom	2525	N	GLY	328	5.178	-1.265	25.711	1.00	33.93
	atom	2526	CA	GLY	328	4.819	-2.660	25.603	1.00	33.67
	atom	2527	C	GLY	328	5.729	-3.370	24.629	1.00	35.70
	atom	2528	O	GLY	328	6.365	-2.742	23.794	1.00	37.17
	atom	2529	N	THR	329	5.768	-4.690	24.733	1.00	35.37
	atom	2530	CA	THR	329	6.593	-5.540	23.888	1.00	35.99
	atom	2531	CB	THR	329	6.534	-6.985	24.418	1.00	32.01
	atom	2532	OG1	THR	329	7.027	-7.007	25.760	1.00	30.91
	atom	2533	CG2	THR	329	7.355	-7.926	23.554	1.00	35.58
	atom	2534	C	THR	329	6.228	-5.550	22.396	1.00	40.80
	atom	2535	O	THR	329	7.055	-5.244	21.535	1.00	41.48
	atom	2536	N	GLN	330	4.990	-5.926	22.100	1.00	44.36
	atom	2537	CA	GLN	330	4.517	-6.019	20.730	1.00	45.72
	atom	2538	CB	GLN	330	3.144	-6.688	20.719	1.00	51.05
	atom	2539	CG	GLN	330	2.965	-7.752	19.654	1.00	54.61
	atom	2540	CD	GLN	330	1.870	-8.739	20.008	1.00	56.95
	atom	2541	OE1	GLN	330	2.135	-9.794	20.584	1.00	59.07
	atom	2542	NE2	GLN	330	0.629	-8.399	19.668	1.00	59.85
	atom	2543	C	GLN	330	4.434	-4.668	20.029	1.00	45.66

	atom	2544	O	GLN	330	4.546	-4.581	18.806	1.00	43.89
	atom	2545	N	GLU	331	4.226	-3.616	20.802	1.00	41.69
	atom	2546	CA	GLU	331	4.118	-2.293	20.222	1.00	42.11
	atom	2547	CB	GLU	331	3.337	-1.390	21.180	1.00	44.12
5	atom	2548	CG	GLU	331	2.808	-2.134	22.434	1.00	52.29
	atom	2549	CD	GLU	331	1.651	-3.102	22.140	1.00	59.11
	atom	2550	OE1	GLU	331	1.842	-4.042	21.333	1.00	60.23
	atom	2551	OE2	GLU	331	0.549	-2.930	22.717	1.00	57.81
	atom	2552	C	GLU	331	5.532	-1.765	19.967	1.00	41.92
10	atom	2553	O	GLU	331	5.819	-1.210	18.908	1.00	41.23
	atom	2554	N	ASP	332	6.416	-1.974	20.938	1.00	40.77
	atom	2555	CA	ASP	332	7.811	-1.550	20.840	1.00	39.94
	atom	2556	CB	ASP	332	8.555	-1.905	22.136	1.00	42.44
	atom	2557	CG	ASP	332	8.590	-0.755	23.145	1.00	41.77
15	atom	2558	OD1	ASP	332	9.634	-0.604	23.814	1.00	47.40
	atom	2559	OD2	ASP	332	7.591	-0.014	23.286	1.00	40.83
	atom	2560	C	ASP	332	8.501	-2.243	19.652	1.00	38.62
	atom	2561	O	ASP	332	9.439	-1.705	19.064	1.00	36.43
	atom	2562	N	ALA	333	8.033	-3.441	19.312	1.00	37.26
20	atom	2563	CA	ALA	333	8.591	-4.213	18.201	1.00	36.68
	atom	2564	CB	ALA	333	8.046	-5.639	18.244	1.00	32.60
	atom	2565	C	ALA	333	8.255	-3.563	16.854	1.00	37.48
	atom	2566	O	ALA	333	9.112	-3.412	15.966	1.00	34.99
	atom	2567	N	ALA	334	6.986	-3.200	16.716	1.00	35.79
25	atom	2568	CA	ALA	334	6.489	-2.550	15.522	1.00	36.76
	atom	2569	CB	ALA	334	4.974	-2.411	15.602	1.00	34.20
	atom	2570	C	ALA	334	7.140	-1.172	15.428	1.00	37.43
	atom	2571	O	ALA	334	7.274	-0.613	14.342	1.00	38.45
	atom	2572	N	SER	335	7.547	-0.633	16.576	1.00	35.67
30	atom	2573	CA	SER	335	8.184	0.678	16.623	1.00	33.79
	atom	2574	CB	SER	335	8.356	1.131	18.067	1.00	34.91
	atom	2575	OG	SER	335	7.166	1.750	18.530	1.00	43.57
	atom	2576	C	SER	335	9.538	0.621	15.952	1.00	32.79
	atom	2577	O	SER	335	9.906	1.518	15.196	1.00	31.36
35	atom	2578	N	LEU	336	10.280	-0.443	16.228	1.00	30.50
	atom	2579	CA	LEU	336	11.590	-0.603	15.634	1.00	31.86

	atom	2580	CB	LEU	336	12.372	-1.673	16.383	1.00	33.29
	atom	2581	CG	LEU	336	13.087	-1.171	17.639	1.00	31.34
	atom	2582	CD1	LEU	336	12.171	-0.290	18.463	1.00	20.59
	atom	2583	CD2	LEU	336	13.549	-2.370	18.430	1.00	32.40
	atom	2584	C	LEU	336	11.432	-0.975	14.167	1.00	32.34
	atom	2585	O	LEU	336	12.355	-0.805	13.375	1.00	32.96
	atom	2586	N	ARG	337	10.252	-1.486	13.819	1.00	33.60
	atom	2587	CA	ARG	337	9.932	-1.848	12.445	1.00	33.24
	atom	2588	CB	ARG	337	8.583	-2.567	12.388	1.00	39.40
	atom	2589	CG	ARG	337	8.589	-3.825	11.538	1.00	49.94
	atom	2590	CD	ARG	337	7.238	-4.047	10.852	1.00	59.30
	atom	2591	NE	ARG	337	7.370	-4.421	9.439	1.00	63.86
	atom	2592	CZ	ARG	337	6.360	-4.447	8.568	1.00	66.11
	atom	2593	NH1	ARG	337	5.130	-4.116	8.954	1.00	65.98
	atom	2594	NH2	ARG	337	6.580	-4.812	7.310	1.00	65.45
	atom	2595	C	ARG	337	9.861	-0.540	11.649	1.00	30.77
	atom	2596	O	ARG	337	10.549	-0.367	10.632	1.00	29.02
	atom	2597	N	VAL	338	9.034	0.387	12.120	1.00	25.67
	atom	2598	CA	VAL	338	8.911	1.679	11.456	1.00	22.88
	atom	2599	CB	VAL	338	7.977	2.621	12.227	1.00	19.78
	atom	2600	CG1	VAL	338	7.907	3.949	11.518	1.00	15.44
	atom	2601	CG2	VAL	338	6.562	1.994	12.350	1.00	21.26
	atom	2602	C	VAL	338	10.281	2.347	11.389	1.00	24.86
	atom	2603	O	VAL	338	10.691	2.844	10.342	1.00	25.74
	atom	2604	N	PHE	339	10.986	2.340	12.521	1.00	23.77
	atom	2605	CA	PHE	339	12.304	2.958	12.627	1.00	19.28
	atom	2606	CB	PHE	339	12.915	2.678	14.010	1.00	15.61
	atom	2607	CG	PHE	339	14.325	3.151	14.156	1.00	4.99
	atom	2608	CD1	PHE	339	14.598	4.396	14.679	1.00	8.98
	atom	2609	CD2	PHE	339	15.376	2.360	13.745	1.00	6.67
	atom	2610	CE1	PHE	339	15.899	4.852	14.792	1.00	5.09
	atom	2611	CE2	PHE	339	16.681	2.795	13.845	1.00	3.05
	atom	2612	CZ	PHE	339	16.950	4.041	14.369	1.00	5.36
	atom	2613	C	PHE	339	13.216	2.445	11.517	1.00	18.38
	atom	2614	O	PHE	339	13.836	3.231	10.804	1.00	12.93
	atom	2615	N	THR	340	13.292	1.125	11.393	1.00	19.94

	atom	2616	CA	THR	340	14.087	0.478	10.347	1.00	23.54
	atom	2617	CB	THR	340	13.938	-1.061	10.441	1.00	23.55
	atom	2618	OG1	THR	340	14.650	-1.531	11.594	1.00	25.63
	atom	2619	CG2	THR	340	14.462	-1.747	9.158	1.00	14.78
	atom	2620	C	THR	340	13.634	0.937	8.934	1.00	21.81
	atom	2621	O	THR	340	14.453	1.177	8.051	1.00	22.00
	atom	2622	N	GLU	341	12.326	1.045	8.735	1.00	19.75
	atom	2623	CA	GLU	341	11.781	1.485	7.457	1.00	21.39
	atom	2624	CB	GLU	341	10.256	1.502	7.500	1.00	21.01
	atom	2625	CG	GLU	341	9.582	0.426	6.716	1.00	29.60
	atom	2626	CD	GLU	341	8.249	0.056	7.324	1.00	33.65
	atom	2627	OE1	GLU	341	8.259	-0.628	8.364	1.00	35.89
	atom	2628	OE2	GLU	341	7.197	0.451	6.772	1.00	36.93
	atom	2629	C	GLU	341	12.265	2.886	7.096	1.00	18.41
	atom	2630	O	GLU	341	12.611	3.138	5.960	1.00	16.03
	atom	2631	N	ALA	342	12.257	3.806	8.058	1.00	16.29
	atom	2632	CA	ALA	342	12.707	5.154	7.776	1.00	12.18
	atom	2633	CB	ALA	342	12.403	6.084	8.964	1.00	7.88
	atom	2634	C	ALA	342	14.199	5.104	7.484	1.00	13.50
	atom	2635	O	ALA	342	14.650	5.700	6.522	1.00	16.97
	atom	2636	N	MET	343	14.955	4.373	8.305	1.00	14.49
	atom	2637	CA	MET	343	16.398	4.241	8.124	1.00	15.19
	atom	2638	CB	MET	343	17.004	3.270	9.156	1.00	17.57
	atom	2639	CG	MET	343	17.237	3.864	10.560	1.00	14.27
	atom	2640	SD	MET	343	18.331	5.315	10.626	1.00	16.83
	atom	2641	CE	MET	343	19.904	4.525	10.716	1.00	9.29
	atom	2642	C	MET	343	16.732	3.744	6.706	1.00	19.52
	atom	2643	O	MET	343	17.683	4.245	6.091	1.00	21.71
	atom	2644	N	THR	344	15.966	2.771	6.203	1.00	15.71
	atom	2645	CA	THR	344	16.173	2.218	4.861	1.00	17.27
	atom	2646	CB	THR	344	15.302	0.951	4.628	1.00	18.13
	atom	2647	OG1	THR	344	15.445	0.061	5.732	1.00	17.94
	atom	2648	CG2	THR	344	15.742	0.225	3.372	1.00	21.00
	atom	2649	C	THR	344	15.850	3.241	3.755	1.00	16.14
	atom	2650	O	THR	344	16.462	3.236	2.688	1.00	14.02
	atom	2651	N	ARG	345	14.880	4.106	4.013	1.00	12.61

	atom	2652	CA	ARG	345	14.514	5.139	3.050	1.00	12.64
	atom	2653	CB	ARG	345	13.279	5.897	3.510	1.00	12.74
	atom	2654	CG	ARG	345	12.139	5.866	2.531	1.00	23.86
	atom	2655	CD	ARG	345	10.858	5.369	3.168	1.00	19.98
	atom	2656	NE	ARG	345	10.509	6.137	4.366	1.00	21.98
	atom	2657	CZ	ARG	345	9.948	5.598	5.446	1.00	22.67
	atom	2658	NH1	ARG	345	9.668	4.296	5.472	1.00	21.96
	atom	2659	NH2	ARG	345	9.647	6.355	6.490	1.00	22.34
	atom	2660	C	ARG	345	15.656	6.116	2.976	1.00	11.48
	atom	2661	O	ARG	345	15.901	6.714	1.952	1.00	14.87
	atom	2662	N	TYR	346	16.364	6.280	4.083	1.00	15.48
	atom	2663	CA	TYR	346	17.466	7.220	4.128	1.00	9.99
	atom	2664	CB	TYR	346	17.676	7.727	5.547	1.00	10.41
	atom	2665	CG	TYR	346	16.487	8.438	6.169	1.00	8.73
	atom	2666	CD1	TYR	346	16.317	8.434	7.548	1.00	2.00
	atom	2667	CE1	TYR	346	15.295	9.163	8.155	1.00	7.81
	atom	2668	CD2	TYR	346	15.588	9.190	5.392	1.00	4.41
	atom	2669	CE2	TYR	346	14.555	9.928	5.991	1.00	4.30
	atom	2670	CZ	TYR	346	14.418	9.905	7.379	1.00	11.40
	atom	2671	OH	TYR	346	13.396	10.572	8.017	1.00	15.46
	atom	2672	C	TYR	346	18.707	6.540	3.654	1.00	10.91
	atom	2673	O	TYR	346	19.776	7.142	3.657	1.00	15.91
	atom	2674	N	SER	347	18.568	5.276	3.256	1.00	9.45
	atom	2675	CA	SER	347	19.705	4.501	2.765	1.00	10.86
	atom	2676	CB	SER	347	20.466	5.282	1.719	1.00	7.57
	atom	2677	OG	SER	347	21.646	4.597	1.427	1.00	15.87
	atom	2678	C	SER	347	20.673	4.122	3.870	1.00	16.39
	atom	2679	O	SER	347	21.850	4.501	3.864	1.00	15.29
	atom	2680	N	ALA	348	20.141	3.381	4.832	1.00	20.85
	atom	2681	CA	ALA	348	20.890	2.888	5.966	1.00	17.62
	atom	2682	CB	ALA	348	20.908	3.916	7.062	1.00	20.88
	atom	2683	C	ALA	348	20.122	1.651	6.401	1.00	19.22
	atom	2684	O	ALA	348	19.618	1.586	7.510	1.00	19.60
	atom	2685	N	PRO	349	20.008	0.656	5.506	1.00	19.14
	atom	2686	CD	PRO	349	20.610	0.620	4.169	1.00	18.98
	atom	2687	CA	PRO	349	19.297	-0.593	5.794	1.00	23.22

	atom	2688	CB	PRO	349	19.263	-1.294	4.443	1.00	19.97
	atom	2689	CG	PRO	349	20.522	-0.844	3.811	1.00	19.73
	atom	2690	C	PRO	349	20.076	-1.387	6.855	1.00	24.19
	atom	2691	O	PRO	349	21.296	-1.264	6.969	1.00	23.65
	atom	2692	N	PRO	350	19.382	-2.243	7.608	1.00	26.82
	atom	2693	CD	PRO	350	17.942	-2.566	7.505	1.00	28.66
	atom	2694	CA	PRO	350	20.022	-3.030	8.660	1.00	29.83
	atom	2695	CB	PRO	350	18.892	-3.229	9.665	1.00	24.26
	atom	2696	CG	PRO	350	17.680	-3.407	8.765	1.00	23.14
	atom	2697	C	PRO	350	20.630	-4.363	8.248	1.00	34.37
	atom	2698	O	PRO	350	20.118	-5.040	7.362	1.00	36.25
	atom	2699	N	GLY	351	21.724	-4.733	8.912	1.00	38.84
	atom	2700	CA	GLY	351	22.360	-6.007	8.643	1.00	41.89
	atom	2701	C	GLY	351	21.517	-7.035	9.371	1.00	44.73
	atom	2702	O	GLY	351	21.035	-8.010	8.783	1.00	46.71
	atom	2703	N	ASP	352	21.348	-6.797	10.670	1.00	43.79
	atom	2704	CA	ASP	352	20.538	-7.641	11.543	1.00	40.29
	atom	2705	CB	ASP	352	21.344	-8.085	12.769	1.00	42.00
	atom	2706	CG	ASP	352	22.586	-8.893	12.400	1.00	45.87
	atom	2707	OD1	ASP	352	22.436	-10.045	11.920	1.00	47.99
	atom	2708	OD2	ASP	352	23.715	-8.383	12.590	1.00	42.81
	atom	2709	C	ASP	352	19.435	-6.685	11.962	1.00	34.65
	atom	2710	O	ASP	352	19.696	-5.519	12.240	1.00	35.06
	atom	2711	N	PRO	353	18.185	-7.143	11.983	1.00	31.95
	atom	2712	CD	PRO	353	17.614	-8.452	11.641	1.00	33.38
	atom	2713	CA	PRO	353	17.153	-6.186	12.389	1.00	32.29
	atom	2714	CB	PRO	353	15.844	-6.973	12.253	1.00	30.63
	atom	2715	CG	PRO	353	16.178	-8.108	11.342	1.00	33.18
	atom	2716	C	PRO	353	17.358	-5.664	13.798	1.00	29.09
	atom	2717	O	PRO	353	18.068	-6.259	14.597	1.00	31.26
	atom	2718	N	PRO	354	16.781	-4.505	14.104	1.00	26.51
	atom	2719	CD	PRO	354	16.000	-3.581	13.266	1.00	25.78
	atom	2720	CA	PRO	354	16.962	-4.007	15.466	1.00	25.23
	atom	2721	CB	PRO	354	16.530	-2.553	15.369	1.00	24.64
	atom	2722	CG	PRO	354	15.522	-2.538	14.245	1.00	24.68
	atom	2723	C	PRO	354	16.040	-4.824	16.381	1.00	26.77

	atom	2724	O	PRO	354	14.897	-5.109	16.026	1.00	21.97
	atom	2725	N	GLN	355	16.531	-5.227	17.546	1.00	28.40
	atom	2726	CA	GLN	355	15.681	-5.993	18.456	1.00	31.14
	atom	2727	CB	GLN	355	16.290	-7.366	18.741	1.00	31.94
	atom	2728	CG	GLN	355	15.254	-8.397	19.171	1.00	39.65
	atom	2729	CD	GLN	355	15.756	-9.837	19.072	1.00	43.94
	atom	2730	OE1	GLN	355	14.980	-10.761	18.775	1.00	44.73
	atom	2731	NE2	GLN	355	17.055	-10.035	19.321	1.00	42.41
	atom	2732	C	GLN	355	15.491	-5.227	19.758	1.00	28.35
	atom	2733	O	GLN	355	16.466	-4.776	20.354	1.00	28.75
	atom	2734	N	PRO	356	14.234	-5.065	20.219	1.00	28.07
	atom	2735	CD	PRO	356	12.949	-5.540	19.680	1.00	26.87
	atom	2736	CA	PRO	356	14.090	-4.321	21.475	1.00	28.99
	atom	2737	CB	PRO	356	12.582	-4.083	21.614	1.00	24.26
	atom	2738	CG	PRO	356	11.923	-4.837	20.517	1.00	26.64
	atom	2739	C	PRO	356	14.675	-5.110	22.654	1.00	33.29
	atom	2740	O	PRO	356	14.465	-6.327	22.782	1.00	31.86
	atom	2741	N	GLU	357	15.426	-4.399	23.490	1.00	33.42
	atom	2742	CA	GLU	357	16.066	-4.966	24.659	1.00	34.65
	atom	2743	CB	GLU	357	17.559	-4.640	24.645	1.00	35.30
	atom	2744	CG	GLU	357	18.509	-5.819	24.474	1.00	42.02
	atom	2745	CD	GLU	357	17.826	-7.124	24.095	1.00	45.77
	atom	2746	OE1	GLU	357	16.715	-7.094	23.525	1.00	49.07
	atom	2747	OE2	GLU	357	18.412	-8.192	24.363	1.00	47.25
	atom	2748	C	GLU	357	15.434	-4.387	25.914	1.00	36.79
	atom	2749	O	GLU	357	14.951	-3.250	25.917	1.00	39.90
	atom	2750	N	TYR	358	15.451	-5.176	26.984	1.00	37.05
	atom	2751	CA	TYR	358	14.885	-4.765	28.257	1.00	35.25
	atom	2752	CB	TYR	358	13.570	-5.519	28.465	1.00	32.55
	atom	2753	CG	TYR	358	12.569	-5.221	27.362	1.00	30.91
	atom	2754	CD1	TYR	358	12.434	-6.077	26.257	1.00	29.07
	atom	2755	CE1	TYR	358	11.550	-5.778	25.223	1.00	29.02
	atom	2756	CD2	TYR	358	11.786	-4.059	27.401	1.00	21.71
	atom	2757	CE2	TYR	358	10.904	-3.753	26.385	1.00	22.18
	atom	2758	CZ	TYR	358	10.788	-4.615	25.289	1.00	26.56
	atom	2759	OH	TYR	358	9.930	-4.307	24.252	1.00	21.27

	atom	2760	C	TYR	358	15.903	-5.051	29.371	1.00	36.31
	atom	2761	O	TYR	358	15.711	-4.688	30.533	1.00	34.68
	atom	2762	N	ASP	359	16.998	-5.691	28.976	1.00	36.10
	atom	2763	CA	ASP	359	18.090	-6.041	29.872	1.00	38.51
	atom	2764	CB	ASP	359	18.347	-7.549	29.810	1.00	42.22
	atom	2765	CG	ASP	359	18.609	-8.157	31.172	1.00	45.06
	atom	2766	OD1	ASP	359	18.951	-7.409	32.115	1.00	52.51
	atom	2767	OD2	ASP	359	18.475	-9.390	31.301	1.00	46.35
	atom	2768	C	ASP	359	19.334	-5.286	29.390	1.00	37.95
	atom	2769	O	ASP	359	20.123	-5.812	28.591	1.00	38.59
	atom	2770	N	LEU	360	19.489	-4.055	29.871	1.00	35.67
	atom	2771	CA	LEU	360	20.604	-3.183	29.506	1.00	36.04
	atom	2772	CB	LEU	360	20.898	-2.201	30.640	1.00	33.38
	atom	2773	CG	LEU	360	22.146	-1.325	30.429	1.00	36.51
	atom	2774	CD1	LEU	360	21.983	-0.471	29.178	1.00	29.43
	atom	2775	CD2	LEU	360	22.377	-0.428	31.659	1.00	35.69
	atom	2776	C	LEU	360	21.884	-3.919	29.147	1.00	36.47
	atom	2777	O	LEU	360	22.582	-3.552	28.205	1.00	37.44
	atom	2778	N	GLU	361	22.187	-4.951	29.921	1.00	38.22
	atom	2779	CA	GLU	361	23.375	-5.767	29.726	1.00	37.55
	atom	2780	CB	GLU	361	23.398	-6.850	30.811	1.00	38.09
	atom	2781	CG	GLU	361	24.653	-7.718	30.868	1.00	38.30
	atom	2782	CD	GLU	361	24.773	-8.468	32.190	1.00	41.50
	atom	2783	OE1	GLU	361	24.849	-9.718	32.158	1.00	42.14
	atom	2784	OE2	GLU	361	24.790	-7.809	33.263	1.00	40.29
	atom	2785	C	GLU	361	23.422	-6.413	28.331	1.00	38.04
	atom	2786	O	GLU	361	24.491	-6.562	27.742	1.00	37.81
	atom	2787	N	LEU	362	22.261	-6.784	27.804	1.00	39.73
	atom	2788	CA	LEU	362	22.194	-7.438	26.502	1.00	40.56
	atom	2789	CB	LEU	362	20.939	-8.314	26.415	1.00	41.68
	atom	2790	CG	LEU	362	21.128	-9.629	27.192	1.00	43.77
	atom	2791	CD1	LEU	362	20.897	-9.377	28.671	1.00	43.87
	atom	2792	CD2	LEU	362	20.182	-10.696	26.693	1.00	42.30
	atom	2793	C	LEU	362	22.257	-6.479	25.327	1.00	38.56
	atom	2794	O	LEU	362	22.198	-6.895	24.178	1.00	35.15
	atom	2795	N	ILE	363	22.389	-5.191	25.617	1.00	35.72

	atom	2796	CA	ILE	363	22.492	-4.216	24.553	1.00	33.58
	atom	2797	CB	ILE	363	21.908	-2.843	24.954	1.00	31.69
	atom	2798	CG2	ILE	363	22.140	-1.825	23.824	1.00	24.34
	atom	2799	CG1	ILE	363	20.414	-2.990	25.262	1.00	32.07
	atom	2800	CD1	ILE	363	19.752	-1.741	25.850	1.00	31.43
	atom	2801	C	ILE	363	23.963	-4.040	24.244	1.00	34.81
	atom	2802	O	ILE	363	24.677	-3.350	24.971	1.00	35.58
	atom	2803	N	THR	364	24.428	-4.670	23.171	1.00	36.70
	atom	2804	CA	THR	364	25.830	-4.529	22.809	1.00	38.81
	atom	2805	CB	THR	364	26.440	-5.865	22.342	1.00	37.77
	atom	2806	OG1	THR	364	27.127	-5.674	21.100	1.00	38.63
	atom	2807	CG2	THR	364	25.360	-6.920	22.187	1.00	42.34
	atom	2808	C	THR	364	25.938	-3.484	21.711	1.00	40.91
	atom	2809	O	THR	364	25.152	-3.487	20.771	1.00	41.93
	atom	2810	N	SER	365	26.899	-2.574	21.856	1.00	42.61
	atom	2811	CA	SER	365	27.112	-1.501	20.890	1.00	43.28
	atom	2812	CB	SER	365	26.287	-0.274	21.280	1.00	43.74
	atom	2813	OG	SER	365	27.083	0.666	21.972	1.00	49.12
	atom	2814	C	SER	365	28.592	-1.150	20.860	1.00	43.10
	atom	2815	O	SER	365	29.229	-1.028	21.913	1.00	40.79
	atom	2816	N	CYS	366	29.127	-0.974	19.652	1.00	42.79
	atom	2817	CA	CYS	366	30.546	-0.684	19.472	1.00	39.94
	atom	2818	CB	CYS	366	31.004	0.421	20.422	1.00	41.76
	atom	2819	SG	CYS	366	30.475	2.075	19.944	1.00	36.64
	atom	2820	C	CYS	366	31.254	-1.989	19.808	1.00	39.86
	atom	2821	O	CYS	366	32.340	-2.014	20.398	1.00	36.65
	atom	2822	N	SER	367	30.590	-3.076	19.439	1.00	39.75
	atom	2823	CA	SER	367	31.087	-4.418	19.672	1.00	43.98
	atom	2824	CB	SER	367	32.360	-4.639	18.864	1.00	43.96
	atom	2825	OG	SER	367	32.060	-5.410	17.709	1.00	50.01
	atom	2826	C	SER	367	31.335	-4.755	21.145	1.00	43.53
	atom	2827	O	SER	367	32.139	-5.641	21.446	1.00	40.55
	atom	2828	N	SER	368	30.633	-4.061	22.046	1.00	42.02
	atom	2829	CA	SER	368	30.775	-4.277	23.490	1.00	42.04
	atom	2830	CB	SER	368	31.930	-3.442	24.040	1.00	39.75
	atom	2831	OG	SER	368	31.627	-2.073	23.956	1.00	38.59

	atom	2832	C	SER	368	29.496	-3.929	24.244	1.00	40.46
	atom	2833	O	SER	368	28.606	-3.290	23.697	1.00	45.32
	atom	2834	N	ASN	369	29.408	-4.339	25.504	1.00	38.14
	atom	2835	CA	ASN	369	28.207	-4.074	26.297	1.00	36.82
5	atom	2836	CB	ASN	369	27.356	-5.328	26.334	1.00	32.52
	atom	2837	CG	ASN	369	28.081	-6.464	26.976	1.00	35.65
	atom	2838	OD1	ASN	369	29.009	-7.020	26.387	1.00	31.04
	atom	2839	ND2	ASN	369	27.693	-6.807	28.206	1.00	31.27
	atom	2840	C	ASN	369	28.482	-3.622	27.737	1.00	32.04
10	atom	2841	O	ASN	369	29.621	-3.510	28.163	1.00	34.41
	atom	2842	N	VAL	370	27.415	-3.367	28.479	1.00	31.49
	atom	2843	CA	VAL	370	27.513	-2.925	29.867	1.00	26.32
	atom	2844	CB	VAL	370	26.467	-1.828	30.214	1.00	29.75
	atom	2845	CG1	VAL	370	26.471	-1.582	31.719	1.00	34.18
15	atom	2846	CG2	VAL	370	26.769	-0.530	29.473	1.00	27.31
	atom	2847	C	VAL	370	27.229	-4.094	30.781	1.00	24.79
	atom	2848	O	VAL	370	26.213	-4.764	30.633	1.00	22.19
	atom	2849	N	SER	371	28.117	-4.331	31.735	1.00	23.19
	atom	2850	CA	SER	371	27.924	-5.427	32.674	1.00	23.60
20	atom	2851	CB	SER	371	28.828	-6.613	32.310	1.00	25.24
	atom	2852	OG	SER	371	28.494	-7.753	33.082	1.00	22.31
	atom	2853	C	SER	371	28.199	-4.991	34.115	1.00	22.66
	atom	2854	O	SER	371	28.827	-3.949	34.366	1.00	20.09
	atom	2855	N	VAL	372	27.738	-5.811	35.057	1.00	22.64
25	atom	2856	CA	VAL	372	27.906	-5.518	36.475	1.00	17.60
	atom	2857	CB	VAL	372	26.571	-5.553	37.221	1.00	20.90
	atom	2858	CG1	VAL	372	26.733	-4.851	38.580	1.00	27.40
	atom	2859	CG2	VAL	372	25.481	-4.892	36.395	1.00	13.71
	atom	2860	C	VAL	372	28.839	-6.435	37.229	1.00	16.83
30	atom	2861	O	VAL	372	28.944	-7.629	36.942	1.00	14.41
	atom	2862	N	ALA	373	29.508	-5.844	38.210	1.00	17.41
	atom	2863	CA	ALA	373	30.428	-6.551	39.089	1.00	19.16
	atom	2864	CB	ALA	373	31.823	-6.513	38.513	1.00	18.04
	atom	2865	C	ALA	373	30.392	-5.843	40.452	1.00	21.67
35	atom	2866	O	ALA	373	29.576	-4.946	40.676	1.00	26.77
	atom	2867	N	HIS	374	31.271	-6.232	41.364	1.00	23.14

	atom	2868	CA	HIS	374	31.300	-5.595	42.667	1.00	22.16
	atom	2869	CB	HIS	374	30.651	-6.502	43.690	1.00	24.08
	atom	2870	CG	HIS	374	29.188	-6.655	43.481	1.00	24.71
	atom	2871	CD2	HIS	374	28.147	-5.888	43.879	1.00	26.82
	atom	2872	ND1	HIS	374	28.656	-7.659	42.702	1.00	27.67
	atom	2873	CE1	HIS	374	27.346	-7.503	42.628	1.00	30.95
	atom	2874	NE2	HIS	374	27.011	-6.436	43.333	1.00	30.76
	atom	2875	C	HIS	374	32.711	-5.262	43.074	1.00	22.31
	atom	2876	O	HIS	374	33.632	-6.036	42.820	1.00	21.64
	atom	2877	N	ASP	375	32.889	-4.115	43.718	1.00	24.50
	atom	2878	CA	ASP	375	34.230	-3.715	44.112	1.00	29.10
	atom	2879	CB	ASP	375	34.394	-2.198	43.988	1.00	26.63
	atom	2880	CG	ASP	375	34.074	-1.463	45.289	1.00	35.06
	atom	2881	OD1	ASP	375	32.935	-1.594	45.791	1.00	34.10
	atom	2882	OD2	ASP	375	34.964	-0.753	45.812	1.00	39.72
	atom	2883	C	ASP	375	34.625	-4.179	45.516	1.00	32.21
	atom	2884	O	ASP	375	33.981	-5.045	46.113	1.00	31.12
	atom	2885	N	ALA	376	35.724	-3.606	45.997	1.00	35.68
	atom	2886	CA	ALA	376	36.303	-3.885	47.299	1.00	35.58
	atom	2887	CB	ALA	376	37.461	-2.919	47.544	1.00	35.31
	atom	2888	C	ALA	376	35.279	-3.766	48.420	1.00	37.67
	atom	2889	O	ALA	376	35.200	-4.639	49.292	1.00	40.35
	atom	2890	N	SER	377	34.510	-2.679	48.402	1.00	36.16
	atom	2891	CA	SER	377	33.491	-2.436	49.417	1.00	36.16
	atom	2892	CB	SER	377	33.248	-0.931	49.580	1.00	36.58
	atom	2893	OG	SER	377	32.132	-0.507	48.816	1.00	38.61
	atom	2894	C	SER	377	32.181	-3.124	49.067	1.00	35.24
	atom	2895	O	SER	377	31.153	-2.877	49.696	1.00	39.96
	atom	2896	N	GLY	378	32.221	-3.971	48.046	1.00	32.64
	atom	2897	CA	GLY	378	31.041	-4.707	47.627	1.00	30.81
	atom	2898	C	GLY	378	29.940	-3.907	46.955	1.00	29.61
	atom	2899	O	GLY	378	28.863	-4.417	46.687	1.00	30.56
	atom	2900	N	LYS	379	30.183	-2.642	46.686	1.00	31.62
	atom	2901	CA	LYS	379	29.154	-1.862	46.036	1.00	35.41
	atom	2902	CB	LYS	379	29.443	-0.371	46.188	1.00	38.09
	atom	2903	CG	LYS	379	28.186	0.487	46.340	1.00	45.80

	atom	2904	CD	LYS	379	28.488	1.905	46.857	1.00	48.97
	atom	2905	CE	LYS	379	29.964	2.277	46.695	1.00	51.29
	atom	2906	NZ	LYS	379	30.768	1.770	47.841	1.00	51.89
	atom	2907	C	LYS	379	29.118	-2.252	44.557	1.00	35.54
	atom	2908	O	LYS	379	30.161	-2.507	43.938	1.00	32.86
	atom	2909	N	ARG	380	27.915	-2.308	43.999	1.00	32.21
	atom	2910	CA	ARG	380	27.751	-2.655	42.599	1.00	30.52
	atom	2911	CB	ARG	380	26.264	-2.677	42.229	1.00	28.52
	atom	2912	CG	ARG	380	25.778	-4.079	41.919	1.00	30.31
	atom	2913	CD	ARG	380	24.290	-4.177	41.882	1.00	29.53
	atom	2914	NE	ARG	380	23.665	-2.895	41.603	1.00	37.25
	atom	2915	CZ	ARG	380	23.472	-2.401	40.385	1.00	44.32
	atom	2916	NH1	ARG	380	23.865	-3.088	39.318	1.00	43.71
	atom	2917	NH2	ARG	380	22.865	-1.224	40.238	1.00	45.97
	atom	2918	C	ARG	380	28.487	-1.679	41.692	1.00	29.93
	atom	2919	O	ARG	380	28.433	-0.475	41.894	1.00	30.85
	atom	2920	N	VAL	381	29.197	-2.207	40.701	1.00	28.88
	atom	2921	CA	VAL	381	29.909	-1.355	39.758	1.00	25.77
	atom	2922	CB	VAL	381	31.430	-1.311	40.043	1.00	24.36
	atom	2923	CG1	VAL	381	32.124	-0.395	39.015	1.00	26.13
	atom	2924	CG2	VAL	381	31.686	-0.790	41.451	1.00	20.86
	atom	2925	C	VAL	381	29.675	-1.801	38.303	1.00	25.30
	atom	2926	O	VAL	381	29.886	-2.970	37.932	1.00	25.22
	atom	2927	N	TYR	382	29.212	-0.858	37.493	1.00	21.24
	atom	2928	CA	TYR	382	28.954	-1.110	36.086	1.00	22.81
	atom	2929	CB	TYR	382	27.815	-0.213	35.597	1.00	21.45
	atom	2930	CG	TYR	382	26.448	-0.580	36.116	1.00	20.84
	atom	2931	CD1	TYR	382	25.914	0.055	37.243	1.00	25.08
	atom	2932	CE1	TYR	382	24.605	-0.206	37.666	1.00	25.18
	atom	2933	CD2	TYR	382	25.647	-1.491	35.433	1.00	17.12
	atom	2934	CE2	TYR	382	24.342	-1.760	35.839	1.00	17.38
	atom	2935	CZ	TYR	382	23.826	-1.110	36.955	1.00	25.77
	atom	2936	OH	TYR	382	22.529	-1.342	37.351	1.00	29.76
	atom	2937	C	TYR	382	30.226	-0.794	35.291	1.00	20.98
	atom	2938	O	TYR	382	30.884	0.207	35.548	1.00	18.59
	atom	2939	N	TYR	383	30.559	-1.654	34.327	1.00	21.35

	atom	2940	CA	TYR	383	31.743	-1.473	33.475	1.00	16.91
	atom	2941	CB	TYR	383	32.922	-2.221	34.077	1.00	13.83
	atom	2942	CG	TYR	383	32.792	-3.724	33.995	1.00	14.40
	atom	2943	CD1	TYR	383	31.821	-4.404	34.758	1.00	13.72
5	atom	2944	CE1	TYR	383	31.683	-5.796	34.689	1.00	6.71
	atom	2945	CD2	TYR	383	33.634	-4.479	33.155	1.00	9.95
	atom	2946	CE2	TYR	383	33.505	-5.864	33.080	1.00	7.10
	atom	2947	CZ	TYR	383	32.526	-6.511	33.846	1.00	10.61
	atom	2948	OH	TYR	383	32.368	-7.866	33.735	1.00	16.75
10	atom	2949	C	TYR	383	31.521	-1.952	32.010	1.00	18.77
	atom	2950	O	TYR	383	30.603	-2.727	31.708	1.00	9.75
	atom	2951	N	LYS	384	32.369	-1.478	31.104	1.00	19.92
	atom	2952	CA	LYS	384	32.248	-1.853	29.702	1.00	22.45
	atom	2953	CB	LYS	384	32.739	-0.735	28.786	1.00	27.13
15	atom	2954	CG	LYS	384	31.704	-0.313	27.750	1.00	29.56
	atom	2955	CD	LYS	384	31.852	1.168	27.429	1.00	40.85
	atom	2956	CE	LYS	384	33.271	1.512	26.960	1.00	43.42
	atom	2957	NZ	LYS	384	33.857	0.457	26.078	1.00	46.63
	atom	2958	C	LYS	384	33.031	-3.105	29.403	1.00	22.12
20	atom	2959	O	LYS	384	34.231	-3.210	29.703	1.00	16.98
	atom	2960	N	THR	385	32.346	-4.062	28.806	1.00	20.06
	atom	2961	CA	THR	385	33.005	-5.300	28.489	1.00	24.67
	atom	2962	CB	THR	385	32.710	-6.366	29.551	1.00	22.75
	atom	2963	OG1	THR	385	33.685	-7.418	29.459	1.00	26.08
25	atom	2964	CG2	THR	385	31.336	-6.939	29.332	1.00	23.99
	atom	2965	C	THR	385	32.606	-5.824	27.107	1.00	26.69
	atom	2966	O	THR	385	31.805	-5.209	26.386	1.00	24.69
	atom	2967	N	ARG	386	33.145	-6.981	26.750	1.00	27.59
	atom	2968	CA	ARG	386	32.865	-7.510	25.438	1.00	26.66
30	atom	2969	CB	ARG	386	33.491	-6.535	24.450	1.00	25.32
	atom	2970	CG	ARG	386	33.794	-7.104	23.128	1.00	29.47
	atom	2971	CD	ARG	386	35.275	-7.147	22.833	1.00	21.97
	atom	2972	NE	ARG	386	35.393	-7.813	21.549	1.00	16.40
	atom	2973	CZ	ARG	386	35.575	-7.174	20.408	1.00	14.25
35	atom	2974	NH1	ARG	386	35.674	-5.848	20.412	1.00	13.74
	atom	2975	NH2	ARG	386	35.582	-7.855	19.268	1.00	14.79

atom	2976	C	ARG	386	33.416	-8.926	25.252	1.00	26.08
atom	2977	O	ARG	386	34.221	-9.393	26.055	1.00	25.80
atom	2978	N	ASP	387	32.950	-9.614	24.210	1.00	26.43
atom	2979	CA	ASP	387	33.440	-10.956	23.887	1.00	23.98
atom	2980	CB	ASP	387	32.830	-11.424	22.582	1.00	23.35
atom	2981	CG	ASP	387	33.001	-12.891	22.369	1.00	22.28
atom	2982	OD1	ASP	387	32.011	-13.610	22.552	1.00	23.37
atom	2983	OD2	ASP	387	34.121	-13.325	22.023	1.00	25.19
atom	2984	C	ASP	387	34.956	-10.796	23.730	1.00	23.39
atom	2985	O	ASP	387	35.422	-9.907	23.023	1.00	21.64
atom	2986	N	PRO	388	35.745	-11.672	24.360	1.00	20.07
atom	2987	CD	PRO	388	35.419	-12.839	25.199	1.00	22.03
atom	2988	CA	PRO	388	37.186	-11.510	24.241	1.00	20.78
atom	2989	CB	PRO	388	37.675	-11.951	25.621	1.00	16.22
atom	2990	CG	PRO	388	36.714	-13.054	26.008	1.00	12.14
atom	2991	C	PRO	388	37.889	-12.249	23.112	1.00	22.26
atom	2992	O	PRO	388	39.102	-12.124	22.957	1.00	27.18
atom	2993	N	THR	389	37.136	-13.018	22.338	1.00	21.73
atom	2994	CA	THR	389	37.692	-13.786	21.228	1.00	20.40
atom	2995	CB	THR	389	36.550	-14.343	20.357	1.00	22.39
atom	2996	OG1	THR	389	35.906	-15.425	21.044	1.00	16.77
atom	2997	CG2	THR	389	37.080	-14.830	19.028	1.00	22.87
atom	2998	C	THR	389	38.696	-13.032	20.332	1.00	21.26
atom	2999	O	THR	389	39.826	-13.472	20.146	1.00	24.16
atom	3000	N	THR	390	38.292	-11.897	19.782	1.00	21.25
atom	3001	CA	THR	390	39.174	-11.131	18.899	1.00	20.93
atom	3002	CB	THR	390	38.361	-9.994	18.153	1.00	22.56
atom	3003	OG1	THR	390	37.408	-10.604	17.276	1.00	16.66
atom	3004	CG2	THR	390	39.281	-9.074	17.329	1.00	11.57
atom	3005	C	THR	390	40.402	-10.560	19.621	1.00	21.83
atom	3006	O	THR	390	41.532	-10.792	19.198	1.00	26.54
atom	3007	N	PRO	391	40.203	-9.783	20.696	1.00	20.46
atom	3008	CD	PRO	391	38.939	-9.335	21.307	1.00	23.31
atom	3009	CA	PRO	391	41.375	-9.244	21.397	1.00	18.74
atom	3010	CB	PRO	391	40.783	-8.599	22.646	1.00	19.00
atom	3011	CG	PRO	391	39.386	-8.261	22.264	1.00	22.32

	atom	3012	C	PRO	391	42.346	-10.374	21.753	1.00	19.61
	atom	3013	O	PRO	391	43.556	-10.213	21.697	1.00	20.76
	atom	3014	N	LEU	392	41.805	-11.526	22.122	1.00	20.17
	atom	3015	CA	LEU	392	42.651	-12.657	22.461	1.00	20.39
	atom	3016	CB	LEU	392	41.809	-13.774	23.077	1.00	17.79
	atom	3017	CG	LEU	392	41.316	-13.439	24.495	1.00	20.98
	atom	3018	CD1	LEU	392	40.801	-14.703	25.199	1.00	14.28
	atom	3019	CD2	LEU	392	42.462	-12.800	25.284	1.00	15.97
	atom	3020	C	LEU	392	43.387	-13.153	21.208	1.00	23.64
	atom	3021	O	LEU	392	44.621	-13.243	21.209	1.00	24.17
	atom	3022	N	ALA	393	42.646	-13.447	20.135	1.00	18.11
	atom	3023	CA	ALA	393	43.279	-13.923	18.918	1.00	15.55
	atom	3024	CB	ALA	393	42.238	-14.182	17.835	1.00	21.47
	atom	3025	C	ALA	393	44.299	-12.907	18.435	1.00	12.85
	atom	3026	O	ALA	393	45.402	-13.264	18.042	1.00	13.55
	atom	3027	N	ARG	394	43.936	-11.633	18.458	1.00	13.79
	atom	3028	CA	ARG	394	44.874	-10.621	18.013	1.00	16.99
	atom	3029	CB	ARG	394	44.200	-9.243	17.922	1.00	14.84
	atom	3030	CG	ARG	394	42.981	-9.232	17.002	1.00	15.72
	atom	3031	CD	ARG	394	42.611	-7.790	16.540	1.00	13.20
	atom	3032	NE	ARG	394	41.714	-7.827	15.388	1.00	13.99
	atom	3033	CZ	ARG	394	40.864	-6.865	15.034	1.00	17.18
	atom	3034	NH1	ARG	394	40.768	-5.751	15.730	1.00	11.02
	atom	3035	NH2	ARG	394	40.089	-7.033	13.975	1.00	20.87
	atom	3036	C	ARG	394	46.016	-10.603	19.019	1.00	20.19
	atom	3037	O	ARG	394	47.165	-10.331	18.671	1.00	23.91
	atom	3038	N	ALA	395	45.692	-10.911	20.269	1.00	22.53
	atom	3039	CA	ALA	395	46.691	-10.949	21.326	1.00	21.63
	atom	3040	CB	ALA	395	46.031	-11.307	22.644	1.00	21.78
	atom	3041	C	ALA	395	47.749	-11.985	20.951	1.00	20.79
	atom	3042	O	ALA	395	48.929	-11.671	20.870	1.00	25.39
	atom	3043	N	ALA	396	47.327	-13.215	20.705	1.00	17.53
	atom	3044	CA	ALA	396	48.272	-14.259	20.313	1.00	20.21
	atom	3045	CB	ALA	396	47.501	-15.546	19.946	1.00	14.05
	atom	3046	C	ALA	396	49.184	-13.831	19.139	1.00	21.58
	atom	3047	O	ALA	396	50.412	-13.959	19.202	1.00	23.50

	atom	3048	N	TRP	397	48.567	-13.325	18.075	1.00	24.33
	atom	3049	CA	TRP	397	49.273	-12.893	16.877	1.00	24.33
	atom	3050	CB	TRP	397	48.282	-12.249	15.889	1.00	27.00
	atom	3051	CG	TRP	397	48.818	-12.082	14.481	1.00	21.69
	atom	3052	CD2	TRP	397	48.556	-12.930	13.361	1.00	19.40
	atom	3053	CE2	TRP	397	49.306	-12.431	12.271	1.00	21.50
	atom	3054	CE3	TRP	397	47.767	-14.066	13.172	1.00	20.91
	atom	3055	CD1	TRP	397	49.685	-11.119	14.039	1.00	25.15
	atom	3056	NE1	TRP	397	49.983	-11.324	12.709	1.00	26.53
	atom	3057	CZ2	TRP	397	49.286	-13.030	11.012	1.00	20.47
	atom	3058	CZ3	TRP	397	47.745	-14.666	11.913	1.00	21.64
	atom	3059	CH2	TRP	397	48.504	-14.147	10.853	1.00	21.89
	atom	3060	C	TRP	397	50.394	-11.912	17.176	1.00	26.40
	atom	3061	O	TRP	397	51.553	-12.140	16.826	1.00	28.58
	atom	3062	N	GLU	398	50.052	-10.810	17.820	1.00	25.70
	atom	3063	CA	GLU	398	51.046	-9.802	18.135	1.00	26.05
	atom	3064	CB	GLU	398	50.327	-8.566	18.679	1.00	27.44
	atom	3065	CG	GLU	398	49.593	-7.791	17.585	1.00	16.99
	atom	3066	CD	GLU	398	48.290	-7.192	18.062	1.00	25.66
	atom	3067	OE1	GLU	398	47.239	-7.598	17.513	1.00	23.39
	atom	3068	OE2	GLU	398	48.319	-6.316	18.975	1.00	20.76
	atom	3069	C	GLU	398	52.176	-10.282	19.069	1.00	28.37
	atom	3070	O	GLU	398	53.158	-9.572	19.274	1.00	29.34
	atom	3071	N	THR	399	52.035	-11.495	19.611	1.00	29.24
	atom	3072	CA	THR	399	53.054	-12.117	20.463	1.00	27.09
	atom	3073	CB	THR	399	52.412	-12.988	21.564	1.00	27.27
	atom	3074	OG1	THR	399	51.363	-12.253	22.193	1.00	26.37
	atom	3075	CG2	THR	399	53.436	-13.368	22.616	1.00	25.59
	atom	3076	C	THR	399	53.929	-13.019	19.556	1.00	28.15
	atom	3077	O	THR	399	55.127	-13.219	19.800	1.00	20.32
	atom	3078	N	ALA	400	53.310	-13.572	18.512	1.00	30.05
	atom	3079	CA	ALA	400	54.028	-14.405	17.539	1.00	27.50
	atom	3080	CB	ALA	400	53.049	-15.277	16.742	1.00	21.91
	atom	3081	C	ALA	400	54.805	-13.509	16.583	1.00	26.63
	atom	3082	O	ALA	400	55.975	-13.743	16.353	1.00	28.00
	atom	3083	N	ARG	401	54.154	-12.472	16.052	1.00	31.26

	atom	3084	CA	ARG	401	54.767	-11.541	15.088	1.00	34.51
	atom	3085	CB	ARG	401	54.039	-11.636	13.743	1.00	37.32
	atom	3086	CG	ARG	401	54.839	-11.178	12.520	1.00	43.26
	atom	3087	CD	ARG	401	54.509	-12.073	11.323	1.00	54.15
	atom	3088	NE	ARG	401	55.128	-11.646	10.064	1.00	62.34
	atom	3089	CZ	ARG	401	54.452	-11.377	8.945	1.00	64.42
	atom	3090	NH1	ARG	401	53.130	-11.486	8.921	1.00	63.18
	atom	3091	NH2	ARG	401	55.092	-11.001	7.846	1.00	61.88
	atom	3092	C	ARG	401	54.753	-10.078	15.527	1.00	36.42
	atom	3093	O	ARG	401	53.685	-9.512	15.778	1.00	36.34
	atom	3094	N	HIS	402	55.928	-9.456	15.583	1.00	37.86
	atom	3095	CA	HIS	402	56.007	-8.058	15.986	1.00	43.64
	atom	3096	CB	HIS	402	57.448	-7.535	15.959	1.00	47.69
	atom	3097	CG	HIS	402	57.572	-6.098	16.383	1.00	53.03
	atom	3098	CD2	HIS	402	58.566	-5.439	17.028	1.00	55.46
	atom	3099	ND1	HIS	402	56.598	-5.157	16.121	1.00	53.71
	atom	3100	CE1	HIS	402	56.985	-3.980	16.584	1.00	53.89
	atom	3101	NE2	HIS	402	58.175	-4.123	17.138	1.00	54.95
	atom	3102	C	HIS	402	55.141	-7.160	15.111	1.00	43.45
	atom	3103	O	HIS	402	55.289	-7.105	13.887	1.00	38.73
	atom	3104	N	THR	403	54.255	-6.435	15.781	1.00	44.61
	atom	3105	CA	THR	403	53.328	-5.533	15.130	1.00	46.87
	atom	3106	CB	THR	403	51.911	-6.007	15.403	1.00	47.26
	atom	3107	OG1	THR	403	51.684	-6.022	16.814	1.00	51.56
	atom	3108	CG2	THR	403	51.735	-7.424	14.886	1.00	44.79
	atom	3109	C	THR	403	53.539	-4.105	15.645	1.00	47.93
	atom	3110	O	THR	403	53.384	-3.825	16.831	1.00	48.56
	atom	3111	N	PRO	404	53.893	-3.178	14.745	1.00	46.86
	atom	3112	CD	PRO	404	54.060	-3.361	13.296	1.00	47.02
	atom	3113	CA	PRO	404	54.130	-1.789	15.139	1.00	46.22
	atom	3114	CB	PRO	404	54.462	-1.092	13.817	1.00	45.60
	atom	3115	CG	PRO	404	53.871	-1.973	12.775	1.00	44.19
	atom	3116	C	PRO	404	52.960	-1.142	15.860	1.00	45.19
	atom	3117	O	PRO	404	53.146	-0.503	16.898	1.00	49.09
	atom	3118	N	VAL	405	51.760	-1.282	15.301	1.00	41.85
	atom	3119	CA	VAL	405	50.568	-0.710	15.922	1.00	37.53

	atom	3120	CB	VAL	405	49.767	0.135	14.921	1.00	36.93
	atom	3121	CG1	VAL	405	48.388	0.440	15.482	1.00	36.61
	atom	3122	CG2	VAL	405	50.519	1.438	14.645	1.00	39.43
	atom	3123	C	VAL	405	49.714	-1.848	16.450	1.00	34.46
5	atom	3124	O	VAL	405	48.885	-2.409	15.730	1.00	34.06
	atom	3125	N	ASN	406	49.922	-2.184	17.719	1.00	31.50
	atom	3126	CA	ASN	406	49.209	-3.294	18.329	1.00	30.75
	atom	3127	CB	ASN	406	50.024	-3.878	19.499	1.00	36.44
	atom	3128	CG	ASN	406	50.160	-2.915	20.679	1.00	34.19
10	atom	3129	OD1	ASN	406	51.245	-2.767	21.239	1.00	39.09
	atom	3130	ND2	ASN	406	49.067	-2.270	21.061	1.00	30.20
	atom	3131	C	ASN	406	47.798	-3.009	18.799	1.00	28.84
	atom	3132	O	ASN	406	47.325	-1.873	18.772	1.00	26.10
	atom	3133	N	SER	407	47.138	-4.073	19.235	1.00	27.19
15	atom	3134	CA	SER	407	45.782	-3.986	19.734	1.00	26.07
	atom	3135	CB	SER	407	44.887	-4.955	18.961	1.00	26.48
	atom	3136	OG	SER	407	45.191	-6.297	19.302	1.00	25.32
	atom	3137	C	SER	407	45.727	-4.329	21.225	1.00	23.15
	atom	3138	O	SER	407	44.884	-3.805	21.947	1.00	22.09
20	atom	3139	N	TRP	408	46.621	-5.204	21.679	1.00	21.91
	atom	3140	CA	TRP	408	46.628	-5.618	23.083	1.00	22.62
	atom	3141	CB	TRP	408	47.685	-6.718	23.332	1.00	24.87
	atom	3142	CG	TRP	408	49.114	-6.264	23.321	1.00	34.74
	atom	3143	CD2	TRP	408	49.869	-5.739	24.427	1.00	38.37
25	atom	3144	CE2	TRP	408	51.157	-5.419	23.938	1.00	39.47
	atom	3145	CE3	TRP	408	49.583	-5.506	25.780	1.00	40.59
	atom	3146	CD1	TRP	408	49.952	-6.244	22.247	1.00	39.02
	atom	3147	NE1	TRP	408	51.179	-5.737	22.607	1.00	40.26
	atom	3148	CZ2	TRP	408	52.159	-4.878	24.755	1.00	38.97
30	atom	3149	CZ3	TRP	408	50.582	-4.965	26.592	1.00	39.78
	atom	3150	CH2	TRP	408	51.854	-4.657	26.073	1.00	38.54
	atom	3151	C	TRP	408	46.767	-4.484	24.107	1.00	18.90
	atom	3152	O	TRP	408	46.071	-4.490	25.116	1.00	13.47
	atom	3153	N	LEU	409	47.636	-3.506	23.855	1.00	19.88
35	atom	3154	CA	LEU	409	47.778	-2.406	24.793	1.00	21.87
	atom	3155	CB	LEU	409	48.894	-1.431	24.366	1.00	21.77

	atom	3156	CG	LEU	409	49.432	-0.444	25.445	1.00	20.23
	atom	3157	CD1	LEU	409	48.851	-0.721	26.815	1.00	7.72
	atom	3158	CD2	LEU	409	50.933	-0.552	25.530	1.00	25.32
	atom	3159	C	LEU	409	46.446	-1.668	24.921	1.00	23.82
	atom	3160	O	LEU	409	45.941	-1.461	26.031	1.00	30.40
	atom	3161	N	GLY	410	45.886	-1.271	23.786	1.00	26.29
	atom	3162	CA	GLY	410	44.609	-0.575	23.773	1.00	18.79
	atom	3163	C	GLY	410	43.515	-1.405	24.418	1.00	18.22
	atom	3164	O	GLY	410	42.666	-0.869	25.129	1.00	20.22
	atom	3165	N	ASN	411	43.517	-2.713	24.193	1.00	16.41
	atom	3166	CA	ASN	411	42.481	-3.554	24.790	1.00	20.57
	atom	3167	CB	ASN	411	42.558	-4.981	24.228	1.00	22.54
	atom	3168	CG	ASN	411	41.743	-5.139	22.950	1.00	26.21
	atom	3169	OD1	ASN	411	40.663	-4.562	22.816	1.00	22.42
	atom	3170	ND2	ASN	411	42.262	-5.916	22.002	1.00	27.07
	atom	3171	C	ASN	411	42.602	-3.552	26.322	1.00	23.22
	atom	3172	O	ASN	411	41.603	-3.438	27.040	1.00	24.02
	atom	3173	N	ILE	412	43.829	-3.653	26.824	1.00	23.26
	atom	3174	CA	ILE	412	44.028	-3.621	28.259	1.00	25.07
	atom	3175	CB	ILE	412	45.523	-3.725	28.638	1.00	23.93
	atom	3176	CG2	ILE	412	45.749	-3.127	30.024	1.00	18.70
	atom	3177	CG1	ILE	412	45.970	-5.190	28.635	1.00	19.81
	atom	3178	CD1	ILE	412	47.463	-5.339	28.749	1.00	21.11
	atom	3179	C	ILE	412	43.493	-2.271	28.743	1.00	27.35
	atom	3180	O	ILE	412	42.649	-2.204	29.651	1.00	26.95
	atom	3181	N	ILE	413	43.992	-1.200	28.127	1.00	23.83
	atom	3182	CA	ILE	413	43.580	0.151	28.492	1.00	24.45
	atom	3183	CB	ILE	413	44.191	1.180	27.531	1.00	22.54
	atom	3184	CG2	ILE	413	43.628	2.549	27.816	1.00	21.13
	atom	3185	CG1	ILE	413	45.715	1.169	27.652	1.00	17.76
	atom	3186	CD1	ILE	413	46.298	2.506	28.043	1.00	14.99
	atom	3187	C	ILE	413	42.059	0.325	28.483	1.00	28.14
	atom	3188	O	ILE	413	41.448	0.643	29.500	1.00	29.02
	atom	3189	N	MET	414	41.450	0.095	27.330	1.00	28.52
	atom	3190	CA	MET	414	40.012	0.257	27.188	1.00	29.29
	atom	3191	CB	MET	414	39.624	0.175	25.708	1.00	32.90

	atom	3192	CG	MET	414	40.240	1.263	24.817	1.00	35.32
	atom	3193	SD	MET	414	39.884	2.945	25.366	1.00	39.55
	atom	3194	CE	MET	414	38.107	3.072	24.864	1.00	34.59
	atom	3195	C	MET	414	39.183	-0.746	27.969	1.00	27.66
5	atom	3196	O	MET	414	38.030	-0.485	28.300	1.00	23.99
	atom	3197	N	TYR	415	39.763	-1.893	28.280	1.00	25.60
	atom	3198	CA	TYR	415	38.998	-2.893	28.984	1.00	21.34
	atom	3199	CB	TYR	415	38.734	-4.049	28.034	1.00	24.82
	atom	3200	CG	TYR	415	37.815	-3.686	26.889	1.00	26.56
10	atom	3201	CD1	TYR	415	38.278	-3.664	25.573	1.00	30.69
	atom	3202	CE1	TYR	415	37.423	-3.334	24.513	1.00	30.41
	atom	3203	CD2	TYR	415	36.486	-3.371	27.119	1.00	20.46
	atom	3204	CE2	TYR	415	35.634	-3.045	26.086	1.00	27.55
	atom	3205	CZ	TYR	415	36.104	-3.027	24.783	1.00	31.34
15	atom	3206	OH	TYR	415	35.258	-2.683	23.759	1.00	36.63
	atom	3207	C	TYR	415	39.626	-3.395	30.275	1.00	21.60
	atom	3208	O	TYR	415	39.391	-4.530	30.677	1.00	25.81
	atom	3209	N	ALA	416	40.389	-2.538	30.945	1.00	16.56
	atom	3210	CA	ALA	416	41.064	-2.907	32.178	1.00	15.18
20	atom	3211	CB	ALA	416	41.840	-1.693	32.745	1.00	11.07
	atom	3212	C	ALA	416	40.156	-3.469	33.267	1.00	14.41
	atom	3213	O	ALA	416	40.493	-4.444	33.931	1.00	17.29
	atom	3214	N	PRO	417	38.962	-2.913	33.414	1.00	13.77
	atom	3215	CD	PRO	417	38.269	-1.865	32.648	1.00	11.64
25	atom	3216	CA	PRO	417	38.158	-3.479	34.492	1.00	13.75
	atom	3217	CB	PRO	417	37.024	-2.469	34.675	1.00	18.39
	atom	3218	CG	PRO	417	37.016	-1.617	33.428	1.00	14.65
	atom	3219	C	PRO	417	37.642	-4.883	34.299	1.00	18.51
	atom	3220	O	PRO	417	37.280	-5.531	35.271	1.00	18.22
30	atom	3221	N	THR	418	37.607	-5.375	33.064	1.00	20.03
	atom	3222	CA	THR	418	37.060	-6.710	32.857	1.00	20.38
	atom	3223	CB	THR	418	36.752	-7.032	31.362	1.00	18.94
	atom	3224	OG1	THR	418	37.979	-7.149	30.640	1.00	24.24
	atom	3225	CG2	THR	418	35.883	-5.955	30.733	1.00	22.06
35	atom	3226	C	THR	418	37.929	-7.832	33.378	1.00	19.48
	atom	3227	O	THR	418	39.093	-7.653	33.703	1.00	23.20

	atom	3228	N	LEU	419	37.313	-9.002	33.401	1.00	18.04
	atom	3229	CA	LEU	419	37.877	-10.242	33.850	1.00	17.47
	atom	3230	CB	LEU	419	36.703	-11.159	34.118	1.00	17.73
	atom	3231	CG	LEU	419	36.660	-12.668	34.155	1.00	17.32
	atom	3232	CD1	LEU	419	37.426	-13.202	35.350	1.00	15.64
	atom	3233	CD2	LEU	419	35.174	-13.058	34.202	1.00	5.95
	atom	3234	C	LEU	419	38.877	-10.846	32.857	1.00	21.36
	atom	3235	O	LEU	419	39.919	-11.365	33.268	1.00	25.50
	atom	3236	N	TRP	420	38.595	-10.767	31.558	1.00	19.31
	atom	3237	CA	TRP	420	39.529	-11.313	30.568	1.00	16.31
	atom	3238	CB	TRP	420	38.871	-11.443	29.183	1.00	16.60
	atom	3239	CG	TRP	420	38.096	-10.243	28.691	1.00	15.67
	atom	3240	CD2	TRP	420	38.538	-9.255	27.744	1.00	18.66
	atom	3241	CE2	TRP	420	37.465	-8.353	27.547	1.00	15.03
	atom	3242	CE3	TRP	420	39.733	-9.045	27.044	1.00	14.81
	atom	3243	CD1	TRP	420	36.812	-9.907	29.014	1.00	16.64
	atom	3244	NE1	TRP	420	36.427	-8.776	28.330	1.00	16.26
	atom	3245	CZ2	TRP	420	37.551	-7.260	26.680	1.00	19.86
	atom	3246	CZ3	TRP	420	39.815	-7.954	26.174	1.00	17.45
	atom	3247	CH2	TRP	420	38.729	-7.075	26.003	1.00	14.89
	atom	3248	C	TRP	420	40.799	-10.483	30.445	1.00	20.41
	atom	3249	O	TRP	420	41.908	-11.034	30.401	1.00	21.54
	atom	3250	N	ALA	421	40.649	-9.160	30.401	1.00	19.45
	atom	3251	CA	ALA	421	41.809	-8.278	30.278	1.00	20.28
	atom	3252	CB	ALA	421	41.348	-6.832	30.028	1.00	15.62
	atom	3253	C	ALA	421	42.724	-8.339	31.506	1.00	22.36
	atom	3254	O	ALA	421	43.945	-8.448	31.380	1.00	21.91
	atom	3255	N	ARG	422	42.123	-8.273	32.689	1.00	24.66
	atom	3256	CA	ARG	422	42.872	-8.312	33.945	1.00	25.99
	atom	3257	CB	ARG	422	41.917	-8.144	35.141	1.00	21.77
	atom	3258	CG	ARG	422	41.564	-6.702	35.464	1.00	25.47
	atom	3259	CD	ARG	422	40.356	-6.590	36.390	1.00	23.71
	atom	3260	NE	ARG	422	40.748	-6.723	37.795	1.00	28.34
	atom	3261	CZ	ARG	422	39.939	-7.135	38.768	1.00	24.07
	atom	3262	NH1	ARG	422	38.679	-7.459	38.493	1.00	22.65
	atom	3263	NH2	ARG	422	40.394	-7.222	40.011	1.00	24.67

	atom	3264	C	ARG	422	43.651	-9.614	34.126	1.00	25.79
	atom	3265	O	ARG	422	44.873	-9.605	34.295	1.00	24.44
	atom	3266	N	MET	423	42.928	-10.731	34.083	1.00	26.91
	atom	3267	CA	MET	423	43.517	-12.037	34.295	1.00	24.73
	atom	3268	CB	MET	423	42.431	-13.029	34.696	1.00	24.95
	atom	3269	CG	MET	423	41.885	-12.782	36.100	1.00	20.83
	atom	3270	SD	MET	423	40.396	-13.720	36.466	1.00	27.40
	atom	3271	CE	MET	423	41.073	-15.318	36.758	1.00	31.81
	atom	3272	C	MET	423	44.305	-12.581	33.131	1.00	28.26
	atom	3273	O	MET	423	45.436	-13.019	33.302	1.00	33.44
	atom	3274	N	ILE	424	43.728	-12.547	31.940	1.00	29.25
	atom	3275	CA	ILE	424	44.430	-13.075	30.785	1.00	28.47
	atom	3276	CB	ILE	424	43.438	-13.561	29.689	1.00	28.93
	atom	3277	CG2	ILE	424	44.179	-14.398	28.648	1.00	31.54
	atom	3278	CG1	ILE	424	42.310	-14.376	30.321	1.00	27.13
	atom	3279	CD1	ILE	424	41.869	-15.563	29.500	1.00	25.34
	atom	3280	C	ILE	424	45.418	-12.097	30.152	1.00	26.53
	atom	3281	O	ILE	424	46.606	-12.364	30.092	1.00	22.13
	atom	3282	N	LEU	425	44.933	-10.958	29.686	1.00	27.79
	atom	3283	CA	LEU	425	45.814	-10.013	29.030	1.00	25.14
	atom	3284	CB	LEU	425	44.987	-8.855	28.471	1.00	25.60
	atom	3285	CG	LEU	425	44.759	-8.829	26.942	1.00	23.43
	atom	3286	CD1	LEU	425	44.638	-10.239	26.337	1.00	23.62
	atom	3287	CD2	LEU	425	43.516	-8.022	26.666	1.00	18.45
	atom	3288	C	LEU	425	46.973	-9.509	29.891	1.00	28.29
	atom	3289	O	LEU	425	48.118	-9.918	29.672	1.00	31.61
	atom	3290	N	MET	426	46.697	-8.645	30.869	1.00	25.95
	atom	3291	CA	MET	426	47.755	-8.109	31.740	1.00	21.90
	atom	3292	CB	MET	426	47.153	-7.506	33.015	1.00	20.33
	atom	3293	CG	MET	426	46.448	-6.160	32.832	1.00	25.81
	atom	3294	SD	MET	426	45.546	-5.699	34.334	1.00	23.86
	atom	3295	CE	MET	426	44.073	-4.933	33.653	1.00	26.48
	atom	3296	C	MET	426	48.784	-9.167	32.159	1.00	21.24
	atom	3297	O	MET	426	49.997	-8.977	32.011	1.00	15.57
	atom	3298	N	THR	427	48.285	-10.284	32.685	1.00	20.68
	atom	3299	CA	THR	427	49.151	-11.352	33.168	1.00	22.46

	atom	3300	CB	THR	427	48.314	-12.564	33.636	1.00	21.10
	atom	3301	OG1	THR	427	47.315	-12.110	34.560	1.00	21.32
	atom	3302	CG2	THR	427	49.191	-13.603	34.331	1.00	18.81
	atom	3303	C	THR	427	50.170	-11.792	32.132	1.00	26.28
	atom	3304	O	THR	427	51.372	-11.816	32.420	1.00	23.91
	atom	3305	N	HIS	428	49.684	-12.072	30.914	1.00	29.15
	atom	3306	CA	HIS	428	50.519	-12.547	29.810	1.00	26.17
	atom	3307	CB	HIS	428	49.633	-13.051	28.656	1.00	26.45
	atom	3308	CG	HIS	428	50.394	-13.421	27.416	1.00	28.96
	atom	3309	CD2	HIS	428	50.658	-14.627	26.859	1.00	27.62
	atom	3310	ND1	HIS	428	50.984	-12.484	26.591	1.00	32.83
	atom	3311	CE1	HIS	428	51.579	-13.098	25.582	1.00	28.37
	atom	3312	NE2	HIS	428	51.395	-14.398	25.722	1.00	27.73
	atom	3313	C	HIS	428	51.569	-11.589	29.252	1.00	23.76
	atom	3314	O	HIS	428	52.702	-11.987	29.010	1.00	25.78
	atom	3315	N	PHE	429	51.215	-10.333	29.051	1.00	22.41
	atom	3316	CA	PHE	429	52.174	-9.414	28.466	1.00	23.35
	atom	3317	CB	PHE	429	51.450	-8.273	27.743	1.00	26.29
	atom	3318	CG	PHE	429	50.937	-8.655	26.379	1.00	29.58
	atom	3319	CD1	PHE	429	49.645	-9.143	26.220	1.00	27.59
	atom	3320	CD2	PHE	429	51.757	-8.547	25.254	1.00	28.87
	atom	3321	CE1	PHE	429	49.171	-9.518	24.960	1.00	31.70
	atom	3322	CE2	PHE	429	51.291	-8.920	23.992	1.00	29.22
	atom	3323	CZ	PHE	429	49.999	-9.408	23.844	1.00	28.94
	atom	3324	C	PHE	429	53.157	-8.870	29.464	1.00	21.85
	atom	3325	O	PHE	429	54.272	-8.522	29.097	1.00	22.96
	atom	3326	N	PHE	430	52.764	-8.777	30.727	1.00	23.11
	atom	3327	CA	PHE	430	53.720	-8.295	31.716	1.00	22.63
	atom	3328	CB	PHE	430	53.045	-7.991	33.060	1.00	25.66
	atom	3329	CG	PHE	430	52.744	-6.532	33.234	1.00	26.12
	atom	3330	CD1	PHE	430	51.549	-5.995	32.750	1.00	30.95
	atom	3331	CD2	PHE	430	53.702	-5.672	33.763	1.00	22.38
	atom	3332	CE1	PHE	430	51.325	-4.615	32.780	1.00	30.80
	atom	3333	CE2	PHE	430	53.484	-4.305	33.796	1.00	23.12
	atom	3334	CZ	PHE	430	52.297	-3.771	33.302	1.00	23.71
	atom	3335	C	PHE	430	54.817	-9.332	31.866	1.00	14.56

	atom	3336	O	PHE	430	55.987	-8.991	31.878	1.00	13.60
	atom	3337	N	SER	431	54.450	-10.598	31.928	1.00	13.05
	atom	3338	CA	SER	431	55.471	-11.635	32.032	1.00	21.25
	atom	3339	CB	SER	431	54.830	-13.002	32.211	1.00	21.00
	atom	3340	OG	SER	431	55.131	-13.817	31.103	1.00	31.38
	atom	3341	C	SER	431	56.356	-11.652	30.785	1.00	23.19
	atom	3342	O	SER	431	57.575	-11.744	30.880	1.00	23.49
	atom	3343	N	ILE	432	55.728	-11.556	29.614	1.00	25.64
	atom	3344	CA	ILE	432	56.447	-11.549	28.342	1.00	23.50
	atom	3345	CB	ILE	432	55.457	-11.541	27.136	1.00	28.33
	atom	3346	CG2	ILE	432	56.202	-11.265	25.837	1.00	25.65
	atom	3347	CG1	ILE	432	54.703	-12.873	27.062	1.00	23.00
	atom	3348	CD1	ILE	432	55.589	-14.080	26.954	1.00	25.84
	atom	3349	C	ILE	432	57.335	-10.317	28.253	1.00	22.62
	atom	3350	O	ILE	432	58.544	-10.424	28.094	1.00	22.84
	atom	3351	N	LEU	433	56.729	-9.141	28.356	1.00	24.53
	atom	3352	CA	LEU	433	57.465	-7.885	28.289	1.00	28.27
	atom	3353	CB	LEU	433	56.490	-6.719	28.446	1.00	29.00
	atom	3354	CG	LEU	433	56.381	-5.734	27.280	1.00	31.05
	atom	3355	CD1	LEU	433	56.165	-6.483	25.967	1.00	30.22
	atom	3356	CD2	LEU	433	55.226	-4.779	27.565	1.00	34.99
	atom	3357	C	LEU	433	58.573	-7.797	29.355	1.00	30.65
	atom	3358	O	LEU	433	59.613	-7.173	29.149	1.00	31.03
	atom	3359	N	LEU	434	58.330	-8.425	30.499	1.00	33.47
	atom	3360	CA	LEU	434	59.287	-8.461	31.603	1.00	31.32
	atom	3361	CB	LEU	434	58.632	-9.135	32.815	1.00	31.68
	atom	3362	CG	LEU	434	59.137	-8.966	34.250	1.00	30.28
	atom	3363	CD1	LEU	434	59.629	-7.560	34.504	1.00	31.77
	atom	3364	CD2	LEU	434	57.994	-9.274	35.188	1.00	31.68
	atom	3365	C	LEU	434	60.524	-9.267	31.194	1.00	30.08
	atom	3366	O	LEU	434	61.655	-8.811	31.334	1.00	30.45
	atom	3367	N	ALA	435	60.282	-10.471	30.685	1.00	27.74
	atom	3368	CA	ALA	435	61.336	-11.383	30.281	1.00	28.28
	atom	3369	CB	ALA	435	60.720	-12.611	29.621	1.00	23.69
	atom	3370	C	ALA	435	62.385	-10.763	29.372	1.00	31.59
	atom	3371	O	ALA	435	63.585	-10.966	29.574	1.00	36.67

	atom	3372	N	GLN	436	61.939	-10.004	28.379	1.00	33.56
	atom	3373	CA	GLN	436	62.843	-9.363	27.431	1.00	35.40
	atom	3374	CB	GLN	436	62.164	-9.295	26.064	1.00	35.46
	atom	3375	CG	GLN	436	61.331	-10.523	25.727	1.00	38.67
	atom	3376	CD	GLN	436	60.034	-10.181	25.007	1.00	43.44
	atom	3377	OE1	GLN	436	59.414	-9.156	25.281	1.00	45.22
	atom	3378	NE2	GLN	436	59.618	-11.043	24.081	1.00	44.42
	atom	3379	C	GLN	436	63.313	-7.959	27.849	1.00	36.75
	atom	3380	O	GLN	436	64.082	-7.319	27.141	1.00	35.16
	atom	3381	N	GLU	437	62.870	-7.489	29.007	1.00	40.76
	atom	3382	CA	GLU	437	63.242	-6.148	29.477	1.00	46.26
	atom	3383	CB	GLU	437	64.773	-5.994	29.564	1.00	49.02
	atom	3384	CG	GLU	437	65.528	-7.231	30.043	1.00	52.27
	atom	3385	CD	GLU	437	65.630	-7.312	31.567	1.00	56.67
	atom	3386	OE1	GLU	437	65.220	-6.339	32.248	1.00	55.25
	atom	3387	OE2	GLU	437	66.118	-8.349	32.080	1.00	50.98
	atom	3388	C	GLU	437	62.667	-5.051	28.555	1.00	45.80
	atom	3389	O	GLU	437	63.386	-4.142	28.129	1.00	41.72
	atom	3390	N	GLN	438	61.364	-5.151	28.272	1.00	45.87
	atom	3391	CA	GLN	438	60.644	-4.201	27.416	1.00	45.42
	atom	3392	CB	GLN	438	59.880	-4.953	26.316	1.00	43.81
	atom	3393	CG	GLN	438	60.742	-5.682	25.310	1.00	42.75
	atom	3394	CD	GLN	438	61.758	-4.782	24.650	1.00	40.98
	atom	3395	OE1	GLN	438	61.622	-3.564	24.675	1.00	40.15
	atom	3396	NE2	GLN	438	62.793	-5.380	24.059	1.00	41.70
	atom	3397	C	GLN	438	59.643	-3.287	28.155	1.00	45.15
	atom	3398	O	GLN	438	59.092	-2.368	27.551	1.00	47.52
	atom	3399	N	LEU	439	59.399	-3.546	29.439	1.00	40.69
	atom	3400	CA	LEU	439	58.457	-2.756	30.243	1.00	36.66
	atom	3401	CB	LEU	439	58.652	-3.068	31.728	1.00	37.89
	atom	3402	CG	LEU	439	57.645	-3.903	32.522	1.00	37.68
	atom	3403	CD1	LEU	439	56.704	-4.675	31.629	1.00	38.36
	atom	3404	CD2	LEU	439	58.433	-4.848	33.390	1.00	37.88
	atom	3405	C	LEU	439	58.540	-1.237	30.059	1.00	35.23
	atom	3406	O	LEU	439	57.515	-0.544	30.051	1.00	31.05
	atom	3407	N	GLU	440	59.756	-0.715	29.930	1.00	31.89

	atom	3408	CA	GLU	440	59.920	0.720	29.772	1.00	34.90
	atom	3409	CB	GLU	440	61.190	1.183	30.487	1.00	36.64
	atom	3410	CG	GLU	440	61.335	0.640	31.901	1.00	45.53
	atom	3411	CD	GLU	440	62.341	-0.500	31.981	1.00	50.11
	atom	3412	OE1	GLU	440	62.010	-1.625	31.542	1.00	53.15
	atom	3413	OE2	GLU	440	63.468	-0.274	32.475	1.00	54.55
	atom	3414	C	GLU	440	59.925	1.184	28.308	1.00	34.27
	atom	3415	O	GLU	440	60.132	2.371	28.031	1.00	33.73
	atom	3416	N	LYS	441	59.694	0.247	27.387	1.00	31.37
	atom	3417	CA	LYS	441	59.643	0.534	25.950	1.00	33.43
	atom	3418	CB	LYS	441	60.006	-0.730	25.144	1.00	35.61
	atom	3419	CG	LYS	441	59.727	-0.671	23.618	1.00	42.33
	atom	3420	CD	LYS	441	59.097	-1.989	23.066	1.00	41.27
	atom	3421	CE	LYS	441	59.790	-2.489	21.781	1.00	39.94
	atom	3422	NZ	LYS	441	59.743	-3.985	21.554	1.00	31.29
	atom	3423	C	LYS	441	58.227	0.986	25.593	1.00	33.13
	atom	3424	O	LYS	441	57.296	0.180	25.551	1.00	35.36
	atom	3425	N	ALA	442	58.056	2.276	25.351	1.00	32.34
	atom	3426	CA	ALA	442	56.742	2.791	25.008	1.00	34.12
	atom	3427	CB	ALA	442	56.771	4.296	24.952	1.00	35.34
	atom	3428	C	ALA	442	56.304	2.235	23.665	1.00	34.92
	atom	3429	O	ALA	442	57.005	2.386	22.667	1.00	34.89
	atom	3430	N	LEU	443	55.142	1.590	23.649	1.00	35.27
	atom	3431	CA	LEU	443	54.590	1.014	22.429	1.00	33.66
	atom	3432	CB	LEU	443	54.054	-0.389	22.704	1.00	33.90
	atom	3433	CG	LEU	443	54.961	-1.308	23.510	1.00	31.74
	atom	3434	CD1	LEU	443	54.159	-1.998	24.625	1.00	29.99
	atom	3435	CD2	LEU	443	55.601	-2.312	22.569	1.00	27.21
	atom	3436	C	LEU	443	53.458	1.888	21.887	1.00	34.85
	atom	3437	O	LEU	443	52.880	2.701	22.607	1.00	35.19
	atom	3438	N	ASP	444	53.153	1.717	20.608	1.00	35.84
	atom	3439	CA	ASP	444	52.102	2.475	19.954	1.00	35.61
	atom	3440	CB	ASP	444	52.533	2.862	18.541	1.00	37.44
	atom	3441	CG	ASP	444	53.342	4.132	18.513	1.00	41.00
	atom	3442	OD1	ASP	444	53.343	4.856	19.531	1.00	48.04
	atom	3443	OD2	ASP	444	53.978	4.411	17.479	1.00	43.49

	atom	3444	C	ASP	444	50.861	1.614	19.874	1.00	37.80
	atom	3445	O	ASP	444	50.951	0.394	19.743	1.00	42.73
	atom	3446	N	CYS	445	49.703	2.254	19.947	1.00	36.49
	atom	3447	CA	CYS	445	48.427	1.566	19.872	1.00	32.65
	atom	3448	CB	CYS	445	48.122	0.908	21.217	1.00	31.96
	atom	3449	SG	CYS	445	47.928	2.067	22.602	1.00	31.57
	atom	3450	C	CYS	445	47.406	2.647	19.546	1.00	34.42
	atom	3451	O	CYS	445	47.707	3.837	19.650	1.00	35.99
	atom	3452	N	GLN	446	46.203	2.270	19.143	1.00	37.45
	atom	3453	CA	GLN	446	45.230	3.307	18.834	1.00	39.79
	atom	3454	CB	GLN	446	44.838	3.247	17.356	1.00	42.93
	atom	3455	CG	GLN	446	44.667	1.848	16.793	1.00	49.59
	atom	3456	CD	GLN	446	43.605	1.777	15.694	1.00	51.80
	atom	3457	OE1	GLN	446	42.943	2.773	15.386	1.00	50.50
	atom	3458	NE2	GLN	446	43.440	0.593	15.101	1.00	51.57
	atom	3459	C	GLN	446	43.979	3.336	19.718	1.00	38.93
	atom	3460	O	GLN	446	43.387	2.307	20.044	1.00	37.54
	atom	3461	N	ILE	447	43.607	4.548	20.114	1.00	36.67
	atom	3462	CA	ILE	447	42.441	4.786	20.945	1.00	36.38
	atom	3463	CB	ILE	447	42.795	5.645	22.197	1.00	36.01
	atom	3464	CG2	ILE	447	41.529	6.004	22.969	1.00	31.49
	atom	3465	CG1	ILE	447	43.771	4.899	23.108	1.00	36.78
	atom	3466	CD1	ILE	447	44.568	5.838	23.996	1.00	35.63
	atom	3467	C	ILE	447	41.476	5.588	20.083	1.00	37.45
	atom	3468	O	ILE	447	41.746	6.750	19.757	1.00	37.62
	atom	3469	N	TYR	448	40.361	4.975	19.700	1.00	34.68
	atom	3470	CA	TYR	448	39.378	5.674	18.879	1.00	32.50
	atom	3471	CB	TYR	448	38.854	6.912	19.618	1.00	34.87
	atom	3472	CG	TYR	448	37.886	6.627	20.755	1.00	38.31
	atom	3473	CD1	TYR	448	37.334	7.675	21.498	1.00	36.85
	atom	3474	CE1	TYR	448	36.430	7.430	22.531	1.00	35.50
	atom	3475	CD2	TYR	448	37.506	5.317	21.079	1.00	36.35
	atom	3476	CE2	TYR	448	36.603	5.062	22.111	1.00	35.25
	atom	3477	CZ	TYR	448	36.072	6.125	22.833	1.00	36.09
	atom	3478	OH	TYR	448	35.195	5.892	23.871	1.00	38.07
	atom	3479	C	TYR	448	39.963	6.108	17.538	1.00	29.38

	atom	3480	O	TYR	448	39.603	7.156	17.015	1.00	27.91
	atom	3481	N	GLY	449	40.882	5.316	16.997	1.00	28.07
	atom	3482	CA	GLY	449	41.457	5.648	15.704	1.00	32.00
	atom	3483	C	GLY	449	42.809	6.331	15.721	1.00	31.19
	atom	3484	O	GLY	449	43.681	6.034	14.901	1.00	33.05
	atom	3485	N	ALA	450	42.982	7.273	16.635	1.00	30.98
	atom	3486	CA	ALA	450	44.254	7.957	16.750	1.00	28.27
	atom	3487	CB	ALA	450	44.121	9.217	17.610	1.00	30.31
	atom	3488	C	ALA	450	45.193	6.964	17.420	1.00	28.07
	atom	3489	O	ALA	450	44.781	6.121	18.224	1.00	22.31
	atom	3490	N	CYS	451	46.457	7.056	17.056	1.00	28.82
	atom	3491	CA	CYS	451	47.459	6.183	17.617	1.00	31.76
	atom	3492	CB	CYS	451	48.369	5.698	16.482	1.00	27.21
	atom	3493	SG	CYS	451	50.150	5.802	16.756	1.00	35.48
	atom	3494	C	CYS	451	48.202	6.984	18.711	1.00	30.83
	atom	3495	O	CYS	451	48.422	8.196	18.586	1.00	27.46
	atom	3496	N	TYR	452	48.541	6.322	19.808	1.00	31.25
	atom	3497	CA	TYR	452	49.235	7.023	20.882	1.00	34.49
	atom	3498	CB	TYR	452	48.306	7.197	22.091	1.00	33.44
	atom	3499	CG	TYR	452	47.171	8.173	21.870	1.00	34.42
	atom	3500	CD1	TYR	452	45.922	7.742	21.408	1.00	37.51
	atom	3501	CE1	TYR	452	44.862	8.648	21.231	1.00	35.59
	atom	3502	CD2	TYR	452	47.335	9.525	22.143	1.00	33.48
	atom	3503	CE2	TYR	452	46.292	10.428	21.970	1.00	37.24
	atom	3504	CZ	TYR	452	45.064	9.991	21.519	1.00	35.65
	atom	3505	OH	TYR	452	44.053	10.913	21.374	1.00	40.73
	atom	3506	C	TYR	452	50.516	6.329	21.328	1.00	35.01
	atom	3507	O	TYR	452	50.783	5.170	20.976	1.00	33.96
	atom	3508	N	SER	453	51.317	7.054	22.093	1.00	34.23
	atom	3509	CA	SER	453	52.542	6.488	22.607	1.00	37.28
	atom	3510	CB	SER	453	53.712	7.406	22.295	1.00	39.51
	atom	3511	OG	SER	453	54.196	7.124	20.987	1.00	46.15
	atom	3512	C	SER	453	52.378	6.300	24.104	1.00	34.97
	atom	3513	O	SER	453	52.468	7.252	24.864	1.00	35.05
	atom	3514	N	ILE	454	52.119	5.064	24.512	1.00	33.46
	atom	3515	CA	ILE	454	51.922	4.754	25.917	1.00	35.76

	atom	3516	CB	ILE	454	50.531	4.137	26.147	1.00	36.03
	atom	3517	CG2	ILE	454	50.102	4.334	27.594	1.00	34.67
	atom	3518	CG1	ILE	454	49.519	4.791	25.215	1.00	34.98
	atom	3519	CD1	ILE	454	48.106	4.328	25.457	1.00	43.10
	atom	3520	C	ILE	454	52.957	3.792	26.479	1.00	36.62
	atom	3521	O	ILE	454	53.293	2.786	25.854	1.00	37.72
	atom	3522	N	GLU	455	53.462	4.108	27.666	1.00	38.15
	atom	3523	CA	GLU	455	54.429	3.242	28.327	1.00	37.42
	atom	3524	CB	GLU	455	55.400	4.062	29.181	1.00	43.05
	atom	3525	CG	GLU	455	56.420	3.207	29.938	1.00	52.80
	atom	3526	CD	GLU	455	57.566	4.028	30.529	1.00	60.10
	atom	3527	OE1	GLU	455	57.711	5.217	30.142	1.00	61.17
	atom	3528	OE2	GLU	455	58.319	3.484	31.379	1.00	57.43
	atom	3529	C	GLU	455	53.628	2.302	29.219	1.00	33.74
	atom	3530	O	GLU	455	52.811	2.743	30.026	1.00	31.84
	atom	3531	N	PRO	456	53.841	0.990	29.075	1.00	32.44
	atom	3532	CD	PRO	456	54.751	0.349	28.115	1.00	30.79
	atom	3533	CA	PRO	456	53.106	0.017	29.896	1.00	34.50
	atom	3534	CB	PRO	456	53.592	-1.345	29.381	1.00	31.83
	atom	3535	CG	PRO	456	54.815	-1.067	28.601	1.00	30.27
	atom	3536	C	PRO	456	53.242	0.160	31.430	1.00	34.64
	atom	3537	O	PRO	456	52.385	-0.309	32.191	1.00	35.63
	atom	3538	N	LEU	457	54.304	0.807	31.889	1.00	31.78
	atom	3539	CA	LEU	457	54.481	0.982	33.324	1.00	32.12
	atom	3540	CB	LEU	457	55.956	1.212	33.657	1.00	21.79
	atom	3541	CG	LEU	457	56.761	-0.081	33.634	1.00	22.59
	atom	3542	CD1	LEU	457	58.200	0.223	33.219	1.00	19.10
	atom	3543	CD2	LEU	457	56.712	-0.768	35.010	1.00	22.90
	atom	3544	C	LEU	457	53.624	2.146	33.837	1.00	33.31
	atom	3545	O	LEU	457	53.595	2.439	35.036	1.00	36.47
	atom	3546	N	ASP	458	52.919	2.802	32.922	1.00	33.33
	atom	3547	CA	ASP	458	52.051	3.913	33.286	1.00	31.28
	atom	3548	CB	ASP	458	52.092	4.982	32.189	1.00	32.32
	atom	3549	CG	ASP	458	53.249	5.961	32.357	1.00	34.97
	atom	3550	OD1	ASP	458	54.061	5.778	33.287	1.00	40.28
	atom	3551	OD2	ASP	458	53.349	6.916	31.557	1.00	32.22

	atom	3552	C	ASP	458	50.609	3.401	33.482	1.00	31.02
	atom	3553	O	ASP	458	49.759	4.099	34.041	1.00	30.30
	atom	3554	N	LEU	459	50.353	2.170	33.048	1.00	29.37
	atom	3555	CA	LEU	459	49.024	1.570	33.142	1.00	32.41
	atom	3556	CB	LEU	459	49.099	0.055	32.916	1.00	31.25
	atom	3557	CG	LEU	459	48.387	-0.525	31.686	1.00	30.27
	atom	3558	CD1	LEU	459	47.562	0.539	30.959	1.00	30.07
	atom	3559	CD2	LEU	459	49.433	-1.122	30.747	1.00	32.96
	atom	3560	C	LEU	459	48.201	1.849	34.393	1.00	32.12
	atom	3561	O	LEU	459	47.100	2.379	34.289	1.00	35.89
	atom	3562	N	PRO	460	48.703	1.493	35.586	1.00	33.11
	atom	3563	CD	PRO	460	49.979	0.837	35.918	1.00	38.22
	atom	3564	CA	PRO	460	47.913	1.761	36.793	1.00	33.08
	atom	3565	CB	PRO	460	48.888	1.463	37.929	1.00	34.84
	atom	3566	CG	PRO	460	49.792	0.442	37.366	1.00	35.29
	atom	3567	C	PRO	460	47.374	3.187	36.848	1.00	32.30
	atom	3568	O	PRO	460	46.208	3.406	37.147	1.00	32.18
	atom	3569	N	GLN	461	48.234	4.153	36.554	1.00	35.60
	atom	3570	CA	GLN	461	47.847	5.566	36.549	1.00	38.98
	atom	3571	CB	GLN	461	49.050	6.444	36.162	1.00	39.47
	atom	3572	CG	GLN	461	50.255	6.291	37.083	1.00	43.98
	atom	3573	CD	GLN	461	51.056	5.033	36.807	1.00	47.00
	atom	3574	OE1	GLN	461	50.725	3.943	37.295	1.00	46.40
	atom	3575	NE2	GLN	461	52.119	5.174	36.020	1.00	48.09
	atom	3576	C	GLN	461	46.709	5.808	35.551	1.00	35.10
	atom	3577	O	GLN	461	45.721	6.458	35.867	1.00	33.36
	atom	3578	N	ILE	462	46.872	5.269	34.348	1.00	31.62
	atom	3579	CA	ILE	462	45.890	5.412	33.280	1.00	29.29
	atom	3580	CB	ILE	462	46.432	4.804	31.963	1.00	30.01
	atom	3581	CG2	ILE	462	45.334	4.705	30.927	1.00	23.54
	atom	3582	CG1	ILE	462	47.602	5.660	31.458	1.00	30.11
	atom	3583	CD1	ILE	462	48.162	5.230	30.125	1.00	30.41
	atom	3584	C	ILE	462	44.600	4.721	33.671	1.00	28.50
	atom	3585	O	ILE	462	43.527	5.337	33.691	1.00	28.02
	atom	3586	N	ILE	463	44.717	3.437	33.990	1.00	24.07
	atom	3587	CA	ILE	463	43.567	2.647	34.396	1.00	22.00

	atom	3588	CB	ILE	463	43.998	1.237	34.884	1.00	21.40
	atom	3589	CG2	ILE	463	42.825	0.506	35.520	1.00	18.74
	atom	3590	CG1	ILE	463	44.512	0.422	33.697	1.00	18.68
	atom	3591	CD1	ILE	463	45.087	-0.913	34.070	1.00	12.35
	atom	3592	C	ILE	463	42.760	3.349	35.489	1.00	20.72
	atom	3593	O	ILE	463	41.535	3.384	35.414	1.00	23.41
	atom	3594	N	GLU	464	43.433	3.920	36.485	1.00	22.46
	atom	3595	CA	GLU	464	42.740	4.601	37.585	1.00	22.89
	atom	3596	CB	GLU	464	43.716	5.012	38.692	1.00	21.90
	atom	3597	CG	GLU	464	43.049	5.029	40.066	1.00	25.91
	atom	3598	CD	GLU	464	43.513	6.164	40.955	1.00	22.81
	atom	3599	OE1	GLU	464	42.968	7.276	40.833	1.00	31.73
	atom	3600	OE2	GLU	464	44.413	5.947	41.780	1.00	17.83
	atom	3601	C	GLU	464	41.954	5.831	37.145	1.00	24.53
	atom	3602	O	GLU	464	40.828	6.046	37.604	1.00	20.69
	atom	3603	N	ARG	465	42.547	6.631	36.257	1.00	24.51
	atom	3604	CA	ARG	465	41.890	7.834	35.750	1.00	26.00
	atom	3605	CB	ARG	465	42.875	8.701	34.961	1.00	32.12
	atom	3606	CG	ARG	465	43.197	10.044	35.645	1.00	40.01
	atom	3607	CD	ARG	465	42.809	11.230	34.768	1.00	45.02
	atom	3608	NE	ARG	465	43.800	12.311	34.763	1.00	50.33
	atom	3609	CZ	ARG	465	45.106	12.153	34.549	1.00	53.41
	atom	3610	NH1	ARG	465	45.615	10.948	34.328	1.00	54.98
	atom	3611	NH2	ARG	465	45.910	13.208	34.548	1.00	55.29
	atom	3612	C	ARG	465	40.677	7.525	34.875	1.00	22.90
	atom	3613	O	ARG	465	39.644	8.190	34.994	1.00	19.84
	atom	3614	N	LEU	466	40.800	6.502	34.031	1.00	19.83
	atom	3615	CA	LEU	466	39.743	6.088	33.116	1.00	24.02
	atom	3616	CB	LEU	466	40.341	5.333	31.927	1.00	22.60
	atom	3617	CG	LEU	466	41.001	6.218	30.866	1.00	30.67
	atom	3618	CD1	LEU	466	41.038	5.496	29.522	1.00	30.43
	atom	3619	CD2	LEU	466	40.215	7.523	30.748	1.00	34.37
	atom	3620	C	LEU	466	38.615	5.240	33.684	1.00	27.55
	atom	3621	O	LEU	466	37.473	5.296	33.197	1.00	30.21
	atom	3622	N	HIS	467	38.914	4.440	34.695	1.00	26.55
	atom	3623	CA	HIS	467	37.876	3.590	35.242	1.00	28.30

	atom	3624	CB	HIS	467	38.161	2.126	34.900	1.00	28.04
	atom	3625	CG	HIS	467	38.535	1.891	33.467	1.00	26.72
	atom	3626	CD2	HIS	467	39.718	2.025	32.819	1.00	26.55
	atom	3627	ND1	HIS	467	37.647	1.385	32.541	1.00	26.65
	atom	3628	CE1	HIS	467	38.268	1.213	31.387	1.00	21.00
	atom	3629	NE2	HIS	467	39.526	1.594	31.530	1.00	24.15
	atom	3630	C	HIS	467	37.666	3.710	36.741	1.00	28.46
	atom	3631	O	HIS	467	36.649	3.241	37.256	1.00	30.52
	atom	3632	N	GLY	468	38.611	4.334	37.440	1.00	26.74
	atom	3633	CA	GLY	468	38.484	4.448	38.882	1.00	24.29
	atom	3634	C	GLY	468	39.183	3.294	39.582	1.00	25.62
	atom	3635	O	GLY	468	39.339	2.214	39.010	1.00	19.92
	atom	3636	N	LEU	469	39.614	3.532	40.821	1.00	27.41
	atom	3637	CA	LEU	469	40.309	2.532	41.627	1.00	29.89
	atom	3638	CB	LEU	469	40.525	3.052	43.053	1.00	33.35
	atom	3639	CG	LEU	469	41.712	2.460	43.821	1.00	31.94
	atom	3640	CD1	LEU	469	43.007	2.984	43.231	1.00	29.73
	atom	3641	CD2	LEU	469	41.610	2.830	45.300	1.00	35.29
	atom	3642	C	LEU	469	39.580	1.206	41.700	1.00	29.26
	atom	3643	O	LEU	469	40.210	0.155	41.813	1.00	30.68
	atom	3644	N	SER	470	38.252	1.263	41.638	1.00	27.44
	atom	3645	CA	SER	470	37.419	0.067	41.704	1.00	25.87
	atom	3646	CB	SER	470	35.968	0.427	41.411	1.00	29.53
	atom	3647	OG	SER	470	35.757	0.551	40.016	1.00	31.53
	atom	3648	C	SER	470	37.888	-0.970	40.707	1.00	26.53
	atom	3649	O	SER	470	37.756	-2.172	40.929	1.00	29.57
	atom	3650	N	ALA	471	38.430	-0.482	39.599	1.00	27.25
	atom	3651	CA	ALA	471	38.933	-1.330	38.537	1.00	25.30
	atom	3652	CB	ALA	471	39.563	-0.471	37.438	1.00	23.22
	atom	3653	C	ALA	471	39.957	-2.300	39.096	1.00	23.15
	atom	3654	O	ALA	471	40.151	-3.385	38.565	1.00	21.29
	atom	3655	N	PHE	472	40.621	-1.911	40.171	1.00	22.24
	atom	3656	CA	PHE	472	41.605	-2.806	40.757	1.00	22.47
	atom	3657	CB	PHE	472	42.751	-1.994	41.369	1.00	20.82
	atom	3658	CG	PHE	472	43.412	-1.024	40.401	1.00	22.27
	atom	3659	CD1	PHE	472	43.502	0.339	40.705	1.00	25.28

	atom	3660	CD2	PHE	472	43.963	-1.469	39.199	1.00	22.58
	atom	3661	CE1	PHE	472	44.134	1.249	39.818	1.00	23.73
	atom	3662	CE2	PHE	472	44.599	-0.570	38.306	1.00	19.69
	atom	3663	CZ	PHE	472	44.681	0.788	38.620	1.00	18.77
	atom	3664	C	PHE	472	41.019	-3.776	41.803	1.00	19.11
	atom	3665	O	PHE	472	41.779	-4.440	42.483	1.00	19.22
	atom	3666	N	SER	473	39.689	-3.898	41.895	1.00	17.04
	atom	3667	CA	SER	473	39.066	-4.791	42.879	1.00	19.15
	atom	3668	CB	SER	473	38.898	-4.052	44.210	1.00	15.08
	atom	3669	OG	SER	473	39.542	-2.792	44.169	1.00	21.73
	atom	3670	C	SER	473	37.715	-5.458	42.531	1.00	23.50
	atom	3671	O	SER	473	37.046	-6.020	43.426	1.00	24.59
	atom	3672	N	LEU	474	37.297	-5.399	41.267	1.00	19.79
	atom	3673	CA	LEU	474	36.037	-6.035	40.864	1.00	18.77
	atom	3674	CB	LEU	474	35.722	-5.694	39.417	1.00	17.39
	atom	3675	CG	LEU	474	35.306	-4.224	39.270	1.00	21.37
	atom	3676	CD1	LEU	474	35.073	-3.906	37.806	1.00	18.50
	atom	3677	CD2	LEU	474	34.030	-3.961	40.066	1.00	21.60
	atom	3678	C	LEU	474	36.163	-7.554	41.074	1.00	17.72
	atom	3679	O	LEU	474	37.209	-8.133	40.775	1.00	16.74
	atom	3680	N	HIS	475	35.107	-8.190	41.595	1.00	17.39
	atom	3681	CA	HIS	475	35.173	-9.610	41.912	1.00	20.42
	atom	3682	CB	HIS	475	35.633	-9.777	43.371	1.00	23.98
	atom	3683	CG	HIS	475	34.746	-9.080	44.364	1.00	25.09
	atom	3684	CD2	HIS	475	34.790	-7.822	44.866	1.00	25.92
	atom	3685	ND1	HIS	475	33.593	-9.649	44.862	1.00	18.65
	atom	3686	CE1	HIS	475	32.963	-8.770	45.620	1.00	21.06
	atom	3687	NE2	HIS	475	33.667	-7.653	45.639	1.00	20.25
	atom	3688	C	HIS	475	33.953	-10.495	41.693	1.00	22.95
	atom	3689	O	HIS	475	34.086	-11.666	41.360	1.00	31.38
	atom	3690	N	SER	476	32.757	-9.993	41.883	1.00	23.66
	atom	3691	CA	SER	476	31.622	-10.896	41.694	1.00	24.47
	atom	3692	CB	SER	476	30.603	-10.663	42.812	1.00	24.01
	atom	3693	OG	SER	476	31.239	-10.905	44.052	1.00	24.42
	atom	3694	C	SER	476	31.005	-10.695	40.321	1.00	25.77
	atom	3695	O	SER	476	29.892	-10.160	40.188	1.00	20.40

atom	3696	N	TYR	477	31.765	-11.122	39.307	1.00	26.00
atom	3697	CA	TYR	477	31.388	-11.005	37.904	1.00	19.74
atom	3698	CB	TYR	477	32.533	-11.480	37.008	1.00	19.75
atom	3699	CG	TYR	477	33.676	-10.485	36.867	1.00	18.11
atom	3700	CD1	TYR	477	34.902	-10.702	37.519	1.00	18.93
atom	3701	CE1	TYR	477	35.965	-9.808	37.384	1.00	15.02
atom	3702	CD2	TYR	477	33.544	-9.339	36.072	1.00	14.17
atom	3703	CE2	TYR	477	34.604	-8.434	35.925	1.00	11.12
atom	3704	CZ	TYR	477	35.811	-8.673	36.584	1.00	15.80
atom	3705	OH	TYR	477	36.862	-7.793	36.461	1.00	14.60
atom	3706	C	TYR	477	30.132	-11.788	37.594	1.00	21.27
atom	3707	O	TYR	477	29.918	-12.863	38.136	1.00	15.87
atom	3708	N	SER	478	29.308	-11.229	36.704	1.00	24.97
atom	3709	CA	SER	478	28.035	-11.828	36.302	1.00	26.44
atom	3710	CB	SER	478	27.291	-10.870	35.375	1.00	27.76
atom	3711	OG	SER	478	27.504	-9.521	35.780	1.00	38.24
atom	3712	C	SER	478	28.180	-13.185	35.627	1.00	26.84
atom	3713	O	SER	478	29.112	-13.404	34.863	1.00	30.30
atom	3714	N	PRO	479	27.250	-14.119	35.905	1.00	26.08
atom	3715	CD	PRO	479	26.099	-13.976	36.813	1.00	23.11
atom	3716	CA	PRO	479	27.303	-15.459	35.304	1.00	21.79
atom	3717	CB	PRO	479	26.060	-16.146	35.855	1.00	21.72
atom	3718	CG	PRO	479	25.782	-15.411	37.157	1.00	25.19
atom	3719	C	PRO	479	27.305	-15.366	33.786	1.00	21.68
atom	3720	O	PRO	479	27.884	-16.197	33.084	1.00	17.16
atom	3721	N	GLY	480	26.648	-14.339	33.273	1.00	25.29
atom	3722	CA	GLY	480	26.643	-14.169	31.832	1.00	30.01
atom	3723	C	GLY	480	28.065	-13.954	31.328	1.00	28.85
atom	3724	O	GLY	480	28.522	-14.638	30.414	1.00	32.62
atom	3725	N	GLU	481	28.767	-13.014	31.955	1.00	27.20
atom	3726	CA	GLU	481	30.130	-12.661	31.594	1.00	23.30
atom	3727	CB	GLU	481	30.541	-11.414	32.381	1.00	20.15
atom	3728	CG	GLU	481	31.927	-10.897	32.051	1.00	20.43
atom	3729	CD	GLU	481	31.956	-10.207	30.715	1.00	19.35
atom	3730	OE1	GLU	481	30.885	-10.129	30.086	1.00	20.86
atom	3731	OE2	GLU	481	33.030	-9.746	30.295	1.00	15.80

	atom	3732	C	GLU	481	31.138	-13.795	31.808	1.00	22.86
	atom	3733	O	GLU	481	31.987	-14.049	30.967	1.00	24.66
	atom	3734	N	ILE	482	31.042	-14.487	32.931	1.00	24.29
	atom	3735	CA	ILE	482	31.960	-15.586	33.216	1.00	23.75
	atom	3736	CB	ILE	482	31.636	-16.222	34.595	1.00	21.07
	atom	3737	CG2	ILE	482	32.349	-17.554	34.759	1.00	19.23
	atom	3738	CG1	ILE	482	32.053	-15.263	35.720	1.00	25.06
	atom	3739	CD1	ILE	482	31.184	-15.360	36.981	1.00	11.49
	atom	3740	C	ILE	482	31.858	-16.657	32.129	1.00	22.96
	atom	3741	O	ILE	482	32.864	-17.197	31.664	1.00	19.77
	atom	3742	N	ASN	483	30.624	-16.949	31.730	1.00	25.32
	atom	3743	CA	ASN	483	30.357	-17.960	30.725	1.00	26.37
	atom	3744	CB	ASN	483	28.867	-18.272	30.712	1.00	27.88
	atom	3745	CG	ASN	483	28.417	-19.012	31.976	1.00	30.46
	atom	3746	OD1	ASN	483	27.251	-18.941	32.377	1.00	28.85
	atom	3747	ND2	ASN	483	29.347	-19.724	32.602	1.00	26.58
	atom	3748	C	ASN	483	30.838	-17.573	29.335	1.00	27.16
	atom	3749	O	ASN	483	31.229	-18.430	28.556	1.00	31.18
	atom	3750	N	ARG	484	30.807	-16.287	29.013	1.00	27.58
	atom	3751	CA	ARG	484	31.289	-15.842	27.709	1.00	28.10
	atom	3752	CB	ARG	484	31.130	-14.325	27.554	1.00	26.85
	atom	3753	CG	ARG	484	30.363	-13.902	26.310	1.00	21.91
	atom	3754	CD	ARG	484	31.067	-12.824	25.561	1.00	19.45
	atom	3755	NE	ARG	484	31.255	-11.611	26.349	1.00	21.38
	atom	3756	CZ	ARG	484	30.493	-10.533	26.238	1.00	21.48
	atom	3757	NH1	ARG	484	29.490	-10.516	25.379	1.00	26.36
	atom	3758	NH2	ARG	484	30.747	-9.462	26.959	1.00	19.75
	atom	3759	C	ARG	484	32.767	-16.196	27.635	1.00	27.40
	atom	3760	O	ARG	484	33.173	-17.043	26.845	1.00	27.83
	atom	3761	N	VAL	485	33.556	-15.541	28.487	1.00	26.59
	atom	3762	CA	VAL	485	34.999	-15.748	28.570	1.00	21.31
	atom	3763	CB	VAL	485	35.584	-15.061	29.810	1.00	21.24
	atom	3764	CG1	VAL	485	37.074	-15.409	29.941	1.00	15.20
	atom	3765	CG2	VAL	485	35.346	-13.564	29.738	1.00	8.73
	atom	3766	C	VAL	485	35.374	-17.215	28.666	1.00	20.45
	atom	3767	O	VAL	485	36.113	-17.729	27.838	1.00	21.30

atom	3768	N	ALA	486	34.871	-17.871	29.703	1.00	21.18
atom	3769	CA	ALA	486	35.156	-19.288	29.943	1.00	22.67
atom	3770	CB	ALA	486	34.340	-19.803	31.166	1.00	17.35
atom	3771	C	ALA	486	34.885	-20.155	28.715	1.00	19.69
atom	3772	O	ALA	486	35.537	-21.169	28.517	1.00	18.82
atom	3773	N	SER	487	33.909	-19.764	27.907	1.00	22.61
atom	3774	CA	SER	487	33.609	-20.501	26.688	1.00	25.49
atom	3775	CB	SER	487	32.206	-20.160	26.169	1.00	27.07
atom	3776	OG	SER	487	31.590	-21.299	25.581	1.00	30.91
atom	3777	C	SER	487	34.648	-20.130	25.632	1.00	23.50
atom	3778	O	SER	487	35.128	-20.977	24.891	1.00	29.79
atom	3779	N	CYS	488	34.998	-18.859	25.567	1.00	21.37
atom	3780	CA	CYS	488	35.978	-18.416	24.595	1.00	23.07
atom	3781	CB	CYS	488	36.041	-16.886	24.566	1.00	27.57
atom	3782	SG	CYS	488	37.623	-16.201	23.951	1.00	35.42
atom	3783	C	CYS	488	37.369	-18.979	24.878	1.00	24.13
atom	3784	O	CYS	488	38.230	-18.971	24.003	1.00	19.04
atom	3785	N	LEU	489	37.606	-19.458	26.098	1.00	23.05
atom	3786	CA	LEU	489	38.928	-19.995	26.402	1.00	26.89
atom	3787	CB	LEU	489	39.218	-19.942	27.902	1.00	25.26
atom	3788	CG	LEU	489	39.080	-18.573	28.567	1.00	25.48
atom	3789	CD1	LEU	489	39.602	-18.669	29.999	1.00	28.94
atom	3790	CD2	LEU	489	39.830	-17.511	27.782	1.00	17.32
atom	3791	C	LEU	489	39.039	-21.415	25.872	1.00	30.01
atom	3792	O	LEU	489	40.064	-21.784	25.297	1.00	31.31
atom	3793	N	ARG	490	37.983	-22.206	26.050	1.00	31.70
atom	3794	CA	ARG	490	37.986	-23.573	25.530	1.00	36.44
atom	3795	CB	ARG	490	36.655	-24.298	25.804	1.00	35.19
atom	3796	CG	ARG	490	35.934	-23.889	27.054	1.00	38.46
atom	3797	CD	ARG	490	36.644	-24.407	28.285	1.00	46.16
atom	3798	NE	ARG	490	37.426	-25.601	27.981	1.00	48.31
atom	3799	CZ	ARG	490	38.724	-25.724	28.231	1.00	47.35
atom	3800	NH1	ARG	490	39.395	-24.720	28.794	1.00	50.17
atom	3801	NH2	ARG	490	39.352	-26.848	27.914	1.00	45.44
atom	3802	C	ARG	490	38.179	-23.468	24.012	1.00	34.69
atom	3803	O	ARG	490	39.094	-24.064	23.447	1.00	35.99

	atom	3804	N	LYS	491	37.313	-22.684	23.373	1.00	33.93
	atom	3805	CA	LYS	491	37.342	-22.488	21.927	1.00	30.91
	atom	3806	CB	LYS	491	36.405	-21.348	21.530	1.00	31.67
	atom	3807	CG	LYS	491	36.199	-21.207	20.032	1.00	23.71
	atom	3808	CD	LYS	491	36.345	-19.775	19.604	1.00	18.85
	atom	3809	CE	LYS	491	35.010	-19.073	19.632	1.00	17.97
	atom	3810	NZ	LYS	491	35.119	-17.732	20.270	1.00	18.39
	atom	3811	C	LYS	491	38.724	-22.205	21.372	1.00	29.48
	atom	3812	O	LYS	491	39.206	-22.942	20.518	1.00	35.23
	atom	3813	N	LEU	492	39.357	-21.146	21.864	1.00	24.61
	atom	3814	CA	LEU	492	40.672	-20.757	21.391	1.00	20.17
	atom	3815	CB	LEU	492	40.992	-19.300	21.777	1.00	20.03
	atom	3816	CG	LEU	492	40.150	-18.181	21.130	1.00	21.96
	atom	3817	CD1	LEU	492	40.756	-16.830	21.365	1.00	16.09
	atom	3818	CD2	LEU	492	40.025	-18.436	19.656	1.00	20.65
	atom	3819	C	LEU	492	41.756	-21.653	21.922	1.00	20.15
	atom	3820	O	LEU	492	42.858	-21.700	21.374	1.00	20.37
	atom	3821	N	GLY	493	41.454	-22.369	22.995	1.00	21.49
	atom	3822	CA	GLY	493	42.464	-23.232	23.577	1.00	16.82
	atom	3823	C	GLY	493	43.354	-22.423	24.504	1.00	18.17
	atom	3824	O	GLY	493	44.542	-22.735	24.696	1.00	14.21
	atom	3825	N	VAL	494	42.790	-21.351	25.053	1.00	19.21
	atom	3826	CA	VAL	494	43.524	-20.523	26.002	1.00	24.71
	atom	3827	CB	VAL	494	42.893	-19.102	26.123	1.00	25.02
	atom	3828	CG1	VAL	494	43.503	-18.349	27.293	1.00	19.22
	atom	3829	CG2	VAL	494	43.147	-18.322	24.841	1.00	23.66
	atom	3830	C	VAL	494	43.457	-21.277	27.345	1.00	22.40
	atom	3831	O	VAL	494	42.462	-21.951	27.630	1.00	24.50
	atom	3832	N	PRO	495	44.528	-21.215	28.156	1.00	19.54
	atom	3833	CD	PRO	495	45.810	-20.531	27.935	1.00	21.70
	atom	3834	CA	PRO	495	44.495	-21.924	29.440	1.00	23.21
	atom	3835	CB	PRO	495	45.945	-21.852	29.937	1.00	20.95
	atom	3836	CG	PRO	495	46.530	-20.686	29.250	1.00	21.74
	atom	3837	C	PRO	495	43.491	-21.339	30.435	1.00	24.06
	atom	3838	O	PRO	495	43.282	-20.137	30.463	1.00	26.09
	atom	3839	N	PRO	496	42.841	-22.200	31.249	1.00	28.36

	atom	3840	CD	PRO	496	43.060	-23.660	31.200	1.00	28.97
	atom	3841	CA	PRO	496	41.838	-21.851	32.275	1.00	25.86
	atom	3842	CB	PRO	496	41.684	-23.149	33.068	1.00	25.85
	atom	3843	CG	PRO	496	41.948	-24.207	32.057	1.00	27.78
	atom	3844	C	PRO	496	42.213	-20.675	33.189	1.00	23.64
	atom	3845	O	PRO	496	43.378	-20.496	33.528	1.00	23.73
	atom	3846	N	LEU	497	41.218	-19.892	33.601	1.00	21.88
	atom	3847	CA	LEU	497	41.456	-18.745	34.480	1.00	24.27
	atom	3848	CB	LEU	497	40.142	-18.061	34.842	1.00	22.62
	atom	3849	CG	LEU	497	39.408	-17.343	33.704	1.00	24.33
	atom	3850	CD1	LEU	497	37.942	-17.224	34.044	1.00	12.65
	atom	3851	CD2	LEU	497	40.038	-15.983	33.457	1.00	22.95
	atom	3852	C	LEU	497	42.166	-19.172	35.764	1.00	28.07
	atom	3853	O	LEU	497	43.116	-18.518	36.207	1.00	29.57
	atom	3854	N	ARG	498	41.707	-20.267	36.363	1.00	28.95
	atom	3855	CA	ARG	498	42.319	-20.766	37.590	1.00	30.56
	atom	3856	CB	ARG	498	41.839	-22.183	37.882	1.00	32.11
	atom	3857	CG	ARG	498	42.785	-23.238	37.340	1.00	35.91
	atom	3858	CD	ARG	498	42.061	-24.216	36.477	1.00	32.41
	atom	3859	NE	ARG	498	41.009	-24.875	37.226	1.00	35.69
	atom	3860	CZ	ARG	498	40.725	-26.169	37.126	1.00	40.90
	atom	3861	NH1	ARG	498	41.429	-26.943	36.301	1.00	40.79
	atom	3862	NH2	ARG	498	39.738	-26.689	37.849	1.00	40.26
	atom	3863	C	ARG	498	43.830	-20.776	37.432	1.00	29.60
	atom	3864	O	ARG	498	44.557	-20.401	38.348	1.00	32.94
	atom	3865	N	VAL	499	44.295	-21.200	36.258	1.00	28.40
	atom	3866	CA	VAL	499	45.727	-21.271	35.965	1.00	30.03
	atom	3867	CB	VAL	499	45.998	-22.107	34.669	1.00	31.72
	atom	3868	CG1	VAL	499	47.445	-21.950	34.222	1.00	27.89
	atom	3869	CG2	VAL	499	45.682	-23.584	34.922	1.00	31.07
	atom	3870	C	VAL	499	46.389	-19.897	35.829	1.00	30.46
	atom	3871	O	VAL	499	47.571	-19.752	36.159	1.00	33.19
	atom	3872	N	TRP	500	45.648	-18.897	35.338	1.00	29.89
	atom	3873	CA	TRP	500	46.192	-17.538	35.185	1.00	26.51
	atom	3874	CB	TRP	500	45.267	-16.660	34.336	1.00	24.61
	atom	3875	CG	TRP	500	45.199	-17.041	32.887	1.00	25.40

	atom	3876	CD2	TRP	500	46.152	-16.731	31.864	1.00	24.73
	atom	3877	CE2	TRP	500	45.682	-17.314	30.664	1.00	26.19
	atom	3878	CE3	TRP	500	47.359	-16.025	31.843	1.00	28.97
	atom	3879	CD1	TRP	500	44.214	-17.773	32.282	1.00	24.17
	atom	3880	NE1	TRP	500	44.499	-17.940	30.948	1.00	25.64
	atom	3881	CZ2	TRP	500	46.375	-17.207	29.451	1.00	28.71
	atom	3882	CZ3	TRP	500	48.055	-15.918	30.634	1.00	29.88
	atom	3883	CH2	TRP	500	47.559	-16.510	29.454	1.00	29.29
	atom	3884	C	TRP	500	46.352	-16.913	36.579	1.00	27.72
	atom	3885	O	TRP	500	47.210	-16.039	36.800	1.00	23.64
	atom	3886	N	ARG	501	45.509	-17.367	37.507	1.00	27.09
	atom	3887	CA	ARG	501	45.545	-16.918	38.894	1.00	28.67
	atom	3888	CB	ARG	501	44.637	-17.801	39.758	1.00	35.79
	atom	3889	CG	ARG	501	43.172	-17.450	39.716	1.00	38.62
	atom	3890	CD	ARG	501	42.767	-16.699	40.966	1.00	48.04
	atom	3891	NE	ARG	501	41.349	-16.351	40.944	1.00	53.32
	atom	3892	CZ	ARG	501	40.600	-16.225	42.032	1.00	56.54
	atom	3893	NH1	ARG	501	41.148	-16.418	43.226	1.00	58.24
	atom	3894	NH2	ARG	501	39.304	-15.942	41.929	1.00	54.62
	atom	3895	C	ARG	501	46.978	-17.088	39.376	1.00	28.15
	atom	3896	O	ARG	501	47.672	-16.125	39.718	1.00	27.14
	atom	3897	N	HIS	502	47.417	-18.339	39.383	1.00	26.19
	atom	3898	CA	HIS	502	48.761	-18.671	39.820	1.00	28.33
	atom	3899	CB	HIS	502	48.873	-20.197	40.007	1.00	30.66
	atom	3900	CG	HIS	502	48.010	-20.729	41.115	1.00	35.27
	atom	3901	CD2	HIS	502	46.681	-20.591	41.360	1.00	38.58
	atom	3902	ND1	HIS	502	48.511	-21.478	42.157	1.00	30.89
	atom	3903	CE1	HIS	502	47.533	-21.776	42.994	1.00	32.86
	atom	3904	NE2	HIS	502	46.411	-21.250	42.534	1.00	33.41
	atom	3905	C	HIS	502	49.840	-18.139	38.874	1.00	27.67
	atom	3906	O	HIS	502	50.954	-17.834	39.294	1.00	29.32
	atom	3907	N	ARG	503	49.526	-18.027	37.593	1.00	30.36
	atom	3908	CA	ARG	503	50.507	-17.501	36.661	1.00	29.55
	atom	3909	CB	ARG	503	49.952	-17.534	35.234	1.00	29.83
	atom	3910	CG	ARG	503	50.599	-18.576	34.324	1.00	31.04
	atom	3911	CD	ARG	503	49.566	-19.584	33.864	1.00	31.18

	atom	3912	NE	ARG	503	50.087	-20.511	32.878	1.00	32.63
	atom	3913	CZ	ARG	503	49.772	-20.476	31.590	1.00	36.79
	atom	3914	NH1	ARG	503	48.934	-19.556	31.139	1.00	42.44
	atom	3915	NH2	ARG	503	50.276	-21.367	30.752	1.00	36.45
	atom	3916	C	ARG	503	50.792	-16.062	37.093	1.00	29.37
	atom	3917	O	ARG	503	51.952	-15.645	37.183	1.00	28.28
	atom	3918	N	ALA	504	49.719	-15.317	37.380	1.00	30.54
	atom	3919	CA	ALA	504	49.818	-13.912	37.808	1.00	30.01
	atom	3920	CB	ALA	504	48.421	-13.251	37.798	1.00	28.20
	atom	3921	C	ALA	504	50.484	-13.741	39.182	1.00	26.83
	atom	3922	O	ALA	504	51.130	-12.727	39.437	1.00	26.69
	atom	3923	N	ARG	505	50.314	-14.723	40.067	1.00	29.85
	atom	3924	CA	ARG	505	50.941	-14.684	41.392	1.00	28.92
	atom	3925	CB	ARG	505	50.750	-16.021	42.123	1.00	29.55
	atom	3926	CG	ARG	505	50.234	-15.905	43.551	1.00	29.85
	atom	3927	CD	ARG	505	49.355	-17.102	43.929	1.00	28.21
	atom	3928	NE	ARG	505	47.997	-16.707	44.314	1.00	26.63
	atom	3929	CZ	ARG	505	46.993	-17.563	44.497	1.00	28.60
	atom	3930	NH1	ARG	505	47.185	-18.867	44.330	1.00	32.91
	atom	3931	NH2	ARG	505	45.793	-17.122	44.844	1.00	30.40
	atom	3932	C	ARG	505	52.424	-14.456	41.147	1.00	28.64
	atom	3933	O	ARG	505	53.033	-13.559	41.730	1.00	30.49
	atom	3934	N	SER	506	52.987	-15.268	40.254	1.00	29.45
	atom	3935	CA	SER	506	54.400	-15.188	39.901	1.00	29.27
	atom	3936	CB	SER	506	54.754	-16.277	38.901	1.00	29.54
	atom	3937	OG	SER	506	55.992	-15.979	38.293	1.00	34.12
	atom	3938	C	SER	506	54.846	-13.839	39.346	1.00	30.70
	atom	3939	O	SER	506	55.725	-13.204	39.924	1.00	37.19
	atom	3940	N	VAL	507	54.251	-13.394	38.237	1.00	28.26
	atom	3941	CA	VAL	507	54.627	-12.108	37.637	1.00	22.81
	atom	3942	CB	VAL	507	53.676	-11.698	36.457	1.00	26.48
	atom	3943	CG1	VAL	507	54.432	-10.848	35.456	1.00	21.43
	atom	3944	CG2	VAL	507	53.080	-12.933	35.788	1.00	28.27
	atom	3945	C	VAL	507	54.630	-10.952	38.641	1.00	21.50
	atom	3946	O	VAL	507	55.576	-10.153	38.662	1.00	18.46
	atom	3947	N	ARG	508	53.570	-10.860	39.453	1.00	17.73

	atom	3948	CA	ARG	508	53.447	-9.795	40.451	1.00	21.28
	atom	3949	CB	ARG	508	52.210	-9.995	41.331	1.00	23.70
	atom	3950	CG	ARG	508	52.311	-9.292	42.667	1.00	21.34
	atom	3951	CD	ARG	508	51.054	-9.455	43.506	1.00	27.66
	atom	3952	NE	ARG	508	51.345	-9.342	44.942	1.00	35.23
	atom	3953	CZ	ARG	508	50.865	-8.377	45.722	1.00	36.06
	atom	3954	NH1	ARG	508	50.057	-7.447	45.207	1.00	43.00
	atom	3955	NH2	ARG	508	51.182	-8.333	47.007	1.00	29.07
	atom	3956	C	ARG	508	54.668	-9.708	41.345	1.00	23.58
	atom	3957	O	ARG	508	55.153	-8.614	41.628	1.00	23.85
	atom	3958	N	ALA	509	55.167	-10.858	41.796	1.00	25.60
	atom	3959	CA	ALA	509	56.351	-10.865	42.651	1.00	27.72
	atom	3960	CB	ALA	509	56.687	-12.294	43.105	1.00	23.46
	atom	3961	C	ALA	509	57.528	-10.256	41.895	1.00	28.42
	atom	3962	O	ALA	509	58.185	-9.348	42.395	1.00	31.69
	atom	3963	N	ARG	510	57.801	-10.751	40.691	1.00	29.60
	atom	3964	CA	ARG	510	58.907	-10.210	39.897	1.00	30.31
	atom	3965	CB	ARG	510	58.949	-10.879	38.519	1.00	30.80
	atom	3966	CG	ARG	510	58.772	-12.383	38.541	1.00	25.71
	atom	3967	CD	ARG	510	60.057	-13.060	38.971	1.00	29.23
	atom	3968	NE	ARG	510	59.840	-14.395	39.532	1.00	37.16
	atom	3969	CZ	ARG	510	60.214	-14.767	40.756	1.00	36.56
	atom	3970	NH1	ARG	510	60.825	-13.909	41.570	1.00	36.23
	atom	3971	NH2	ARG	510	59.997	-16.010	41.158	1.00	40.17
	atom	3972	C	ARG	510	58.736	-8.696	39.725	1.00	31.40
	atom	3973	O	ARG	510	59.709	-7.941	39.715	1.00	33.60
	atom	3974	N	LEU	511	57.488	-8.258	39.594	1.00	31.86
	atom	3975	CA	LEU	511	57.190	-6.839	39.426	1.00	31.44
	atom	3976	CB	LEU	511	55.731	-6.663	39.003	1.00	29.79
	atom	3977	CG	LEU	511	55.507	-6.884	37.505	1.00	29.00
	atom	3978	CD1	LEU	511	54.110	-7.401	37.263	1.00	17.51
	atom	3979	CD2	LEU	511	55.761	-5.572	36.771	1.00	25.34
	atom	3980	C	LEU	511	57.456	-6.035	40.693	1.00	30.76
	atom	3981	O	LEU	511	58.128	-4.995	40.651	1.00	28.21
	atom	3982	N	LEU	512	56.921	-6.512	41.817	1.00	30.48
	atom	3983	CA	LEU	512	57.098	-5.832	43.105	1.00	31.67

	atom	3984	CB	LEU	512	56.464	-6.630	44.255	1.00	26.28
	atom	3985	CG	LEU	512	54.962	-6.923	44.325	1.00	25.66
	atom	3986	CD1	LEU	512	54.697	-7.844	45.506	1.00	28.82
	atom	3987	CD2	LEU	512	54.170	-5.640	44.461	1.00	24.03
	atom	3988	C	LEU	512	58.580	-5.693	43.406	1.00	32.91
	atom	3989	O	LEU	512	59.094	-4.594	43.620	1.00	32.69
	atom	3990	N	SER	513	59.255	-6.834	43.397	1.00	34.16
	atom	3991	CA	SER	513	60.672	-6.911	43.703	1.00	36.93
	atom	3992	CB	SER	513	61.081	-8.383	43.740	1.00	40.96
	atom	3993	OG	SER	513	60.182	-9.113	44.573	1.00	44.02
	atom	3994	C	SER	513	61.610	-6.111	42.803	1.00	35.75
	atom	3995	O	SER	513	62.828	-6.217	42.926	1.00	33.41
	atom	3996	N	GLN	514	61.037	-5.300	41.919	1.00	36.55
	atom	3997	CA	GLN	514	61.814	-4.477	40.993	1.00	37.95
	atom	3998	CB	GLN	514	61.233	-4.594	39.579	1.00	43.77
	atom	3999	CG	GLN	514	62.066	-5.394	38.573	1.00	47.35
	atom	4000	CD	GLN	514	61.926	-4.857	37.148	1.00	49.16
	atom	4001	OE1	GLN	514	61.272	-3.833	36.917	1.00	47.00
	atom	4002	NE2	GLN	514	62.543	-5.543	36.191	1.00	46.07
	atom	4003	C	GLN	514	61.750	-3.024	41.449	1.00	37.72
	atom	4004	O	GLN	514	62.449	-2.157	40.929	1.00	36.03
	atom	4005	N	GLY	515	60.887	-2.768	42.426	1.00	39.33
	atom	4006	CA	GLY	515	60.728	-1.428	42.961	1.00	37.28
	atom	4007	C	GLY	515	60.198	-0.401	41.977	1.00	36.85
	atom	4008	O	GLY	515	60.109	-0.661	40.779	1.00	38.20
	atom	4009	N	GLY	516	59.836	0.767	42.499	1.00	34.66
	atom	4010	CA	GLY	516	59.329	1.844	41.674	1.00	34.83
	atom	4011	C	GLY	516	58.137	1.511	40.802	1.00	38.42
	atom	4012	O	GLY	516	57.261	0.733	41.188	1.00	38.53
	atom	4013	N	ARG	517	58.118	2.116	39.615	1.00	38.74
	atom	4014	CA	ARG	517	57.045	1.934	38.645	1.00	36.26
	atom	4015	CB	ARG	517	57.460	2.526	37.291	1.00	40.21
	atom	4016	CG	ARG	517	56.814	3.870	36.966	1.00	42.74
	atom	4017	CD	ARG	517	56.180	3.839	35.593	1.00	47.21
	atom	4018	NE	ARG	517	56.420	5.069	34.853	1.00	54.13
	atom	4019	CZ	ARG	517	57.453	5.268	34.038	1.00	57.23

	atom	4020	NH1	ARG	517	58.353	4.311	33.843	1.00	58.02
	atom	4021	NH2	ARG	517	57.592	6.432	33.417	1.00	60.37
	atom	4022	C	ARG	517	56.620	0.485	38.463	1.00	31.93
	atom	4023	O	ARG	517	55.429	0.187	38.429	1.00	34.78
	atom	4024	N	ALA	518	57.579	-0.425	38.347	1.00	26.14
	atom	4025	CA	ALA	518	57.223	-1.829	38.168	1.00	22.43
	atom	4026	CB	ALA	518	58.451	-2.647	37.912	1.00	12.91
	atom	4027	C	ALA	518	56.472	-2.382	39.375	1.00	22.93
	atom	4028	O	ALA	518	55.624	-3.264	39.233	1.00	27.32
	atom	4029	N	ALA	519	56.792	-1.858	40.557	1.00	21.96
	atom	4030	CA	ALA	519	56.170	-2.278	41.814	1.00	19.91
	atom	4031	CB	ALA	519	56.898	-1.606	42.994	1.00	18.47
	atom	4032	C	ALA	519	54.681	-1.934	41.854	1.00	19.73
	atom	4033	O	ALA	519	53.842	-2.755	42.242	1.00	19.04
	atom	4034	N	THR	520	54.364	-0.707	41.458	1.00	18.50
	atom	4035	CA	THR	520	52.989	-0.232	41.438	1.00	20.32
	atom	4036	CB	THR	520	52.949	1.204	40.951	1.00	19.03
	atom	4037	OG1	THR	520	54.030	1.917	41.553	1.00	21.87
	atom	4038	CG2	THR	520	51.633	1.871	41.335	1.00	18.89
	atom	4039	C	THR	520	52.083	-1.105	40.555	1.00	23.76
	atom	4040	O	THR	520	50.979	-1.467	40.972	1.00	23.67
	atom	4041	N	CYS	521	52.558	-1.444	39.347	1.00	23.17
	atom	4042	CA	CYS	521	51.797	-2.277	38.400	1.00	20.75
	atom	4043	CB	CYS	521	52.578	-2.500	37.085	1.00	21.11
	atom	4044	SG	CYS	521	52.915	-1.041	36.055	1.00	19.44
	atom	4045	C	CYS	521	51.511	-3.634	39.021	1.00	19.50
	atom	4046	O	CYS	521	50.404	-4.150	38.929	1.00	17.79
	atom	4047	N	GLY	522	52.532	-4.207	39.647	1.00	21.28
	atom	4048	CA	GLY	522	52.393	-5.506	40.275	1.00	22.36
	atom	4049	C	GLY	522	51.388	-5.533	41.410	1.00	23.69
	atom	4050	O	GLY	522	50.574	-6.460	41.536	1.00	23.11
	atom	4051	N	LYS	523	51.428	-4.493	42.225	1.00	22.86
	atom	4052	CA	LYS	523	50.558	-4.398	43.377	1.00	23.60
	atom	4053	CB	LYS	523	51.172	-3.378	44.350	1.00	24.30
	atom	4054	CG	LYS	523	50.260	-2.905	45.451	1.00	23.91
	atom	4055	CD	LYS	523	50.944	-1.863	46.305	1.00	23.00

	atom	4056	CE	LYS	523	49.926	-0.991	47.022	1.00	15.09
	atom	4057	NZ	LYS	523	50.577	0.297	47.363	1.00	24.31
	atom	4058	C	LYS	523	49.114	-4.038	42.999	1.00	23.55
	atom	4059	O	LYS	523	48.153	-4.609	43.522	1.00	21.85
	atom	4060	N	TYR	524	48.956	-3.109	42.069	1.00	24.89
	atom	4061	CA	TYR	524	47.619	-2.698	41.670	1.00	25.96
	atom	4062	CB	TYR	524	47.670	-1.245	41.180	1.00	28.83
	atom	4063	CG	TYR	524	47.768	-0.228	42.308	1.00	33.95
	atom	4064	CD1	TYR	524	49.001	0.183	42.804	1.00	34.62
	atom	4065	CE1	TYR	524	49.091	1.078	43.857	1.00	34.16
	atom	4066	CD2	TYR	524	46.626	0.291	42.898	1.00	37.95
	atom	4067	CE2	TYR	524	46.704	1.191	43.955	1.00	37.15
	atom	4068	CZ	TYR	524	47.935	1.577	44.432	1.00	36.53
	atom	4069	OH	TYR	524	47.997	2.449	45.493	1.00	32.27
	atom	4070	C	TYR	524	46.947	-3.613	40.618	1.00	26.26
	atom	4071	O	TYR	524	45.776	-3.992	40.757	1.00	22.96
	atom	4072	N	LEU	525	47.691	-3.991	39.586	1.00	22.18
	atom	4073	CA	LEU	525	47.119	-4.810	38.542	1.00	20.89
	atom	4074	CB	LEU	525	47.985	-4.777	37.269	1.00	22.07
	atom	4075	CG	LEU	525	48.681	-3.501	36.795	1.00	20.02
	atom	4076	CD1	LEU	525	49.224	-3.735	35.404	1.00	21.33
	atom	4077	CD2	LEU	525	47.709	-2.343	36.777	1.00	24.35
	atom	4078	C	LEU	525	46.925	-6.250	38.942	1.00	20.45
	atom	4079	O	LEU	525	46.038	-6.923	38.413	1.00	15.81
	atom	4080	N	PHE	526	47.741	-6.735	39.874	1.00	22.31
	atom	4081	CA	PHE	526	47.644	-8.152	40.235	1.00	22.49
	atom	4082	CB	PHE	526	48.964	-8.873	39.886	1.00	22.99
	atom	4083	CG	PHE	526	49.400	-8.698	38.431	1.00	25.29
	atom	4084	CD1	PHE	526	50.460	-7.850	38.096	1.00	25.34
	atom	4085	CD2	PHE	526	48.759	-9.384	37.401	1.00	21.86
	atom	4086	CE1	PHE	526	50.869	-7.694	36.752	1.00	25.39
	atom	4087	CE2	PHE	526	49.169	-9.227	36.045	1.00	17.50
	atom	4088	CZ	PHE	526	50.217	-8.389	35.725	1.00	13.10
	atom	4089	C	PHE	526	47.221	-8.489	41.647	1.00	19.48
	atom	4090	O	PHE	526	47.415	-9.608	42.102	1.00	21.11
	atom	4091	N	ASN	527	46.624	-7.533	42.337	1.00	20.76

	atom	4092	CA	ASN	527	46.149	-7.793	43.688	1.00	22.83
	atom	4093	CB	ASN	527	45.626	-6.505	44.317	1.00	23.25
	atom	4094	CG	ASN	527	45.882	-6.442	45.804	1.00	29.10
	atom	4095	OD1	ASN	527	47.023	-6.609	46.267	1.00	29.32
	atom	4096	ND2	ASN	527	44.825	-6.200	46.569	1.00	25.69
	atom	4097	C	ASN	527	45.030	-8.844	43.656	1.00	26.22
	atom	4098	O	ASN	527	44.807	-9.562	44.634	1.00	28.05
	atom	4099	N	TRP	528	44.338	-8.929	42.519	1.00	25.55
	atom	4100	CA	TRP	528	43.235	-9.870	42.331	1.00	21.63
	atom	4101	CB	TRP	528	42.522	-9.598	40.985	1.00	22.24
	atom	4102	CG	TRP	528	43.395	-9.876	39.766	1.00	21.93
	atom	4103	CD2	TRP	528	43.743	-11.165	39.231	1.00	15.27
	atom	4104	CE2	TRP	528	44.720	-10.953	38.223	1.00	15.15
	atom	4105	CE3	TRP	528	43.333	-12.471	39.508	1.00	15.06
	atom	4106	CD1	TRP	528	44.140	-8.959	39.064	1.00	19.56
	atom	4107	NE1	TRP	528	44.939	-9.600	38.140	1.00	18.97
	atom	4108	CZ2	TRP	528	45.296	-12.008	37.492	1.00	12.20
	atom	4109	CZ3	TRP	528	43.912	-13.533	38.773	1.00	19.97
	atom	4110	CH2	TRP	528	44.884	-13.286	37.779	1.00	8.34
	atom	4111	C	TRP	528	43.762	-11.302	42.358	1.00	22.78
	atom	4112	O	TRP	528	43.004	-12.248	42.589	1.00	19.61
	atom	4113	N	ALA	529	45.065	-11.457	42.127	1.00	25.58
	atom	4114	CA	ALA	529	45.685	-12.788	42.105	1.00	27.14
	atom	4115	CB	ALA	529	46.958	-12.770	41.260	1.00	18.67
	atom	4116	C	ALA	529	46.003	-13.303	43.506	1.00	29.41
	atom	4117	O	ALA	529	45.629	-14.420	43.860	1.00	34.21
	atom	4118	N	VAL	530	46.697	-12.494	44.299	1.00	32.86
	atom	4119	CA	VAL	530	47.060	-12.891	45.658	1.00	33.40
	atom	4120	CB	VAL	530	47.841	-11.766	46.390	1.00	30.83
	atom	4121	CG1	VAL	530	48.779	-11.062	45.428	1.00	25.66
	atom	4122	CG2	VAL	530	46.883	-10.771	46.996	1.00	28.82
	atom	4123	C	VAL	530	45.830	-13.270	46.486	1.00	36.02
	atom	4124	O	VAL	530	44.722	-12.784	46.244	1.00	38.52
	atom	4125	N	LYS	531	46.036	-14.144	47.463	1.00	37.87
	atom	4126	CA	LYS	531	44.961	-14.618	48.338	1.00	38.09
	atom	4127	CB	LYS	531	45.391	-15.931	49.000	1.00	39.79

	atom	4128	CG	LYS	531	46.569	-16.622	48.297	1.00	39.57
	atom	4129	CD	LYS	531	47.866	-15.835	48.497	1.00	43.25
	atom	4130	CE	LYS	531	48.987	-16.305	47.577	1.00	42.83
	atom	4131	NZ	LYS	531	49.841	-17.350	48.229	1.00	43.17
	atom	4132	C	LYS	531	44.576	-13.573	49.396	1.00	35.98
	atom	4133	O	LYS	531	43.399	-13.196	49.520	1.00	36.42
	atom	4134	N	THR	532	45.560	-13.117	50.166	1.00	30.00
	atom	4135	CA	THR	532	45.299	-12.094	51.168	1.00	28.74
	atom	4136	CB	THR	532	46.227	-12.223	52.369	1.00	30.19
	atom	4137	OG1	THR	532	46.902	-13.481	52.309	1.00	38.47
	atom	4138	CG2	THR	532	45.422	-12.130	53.659	1.00	30.91
	atom	4139	C	THR	532	45.541	-10.758	50.496	1.00	25.04
	atom	4140	O	THR	532	46.663	-10.273	50.408	1.00	20.08
	atom	4141	N	LYS	533	44.471	-10.160	50.018	1.00	26.10
	atom	4142	CA	LYS	533	44.615	-8.914	49.308	1.00	31.36
	atom	4143	CB	LYS	533	43.310	-8.599	48.579	1.00	35.12
	atom	4144	CG	LYS	533	43.123	-9.393	47.287	1.00	41.81
	atom	4145	CD	LYS	533	41.866	-10.265	47.324	1.00	43.68
	atom	4146	CE	LYS	533	42.079	-11.593	46.587	1.00	45.13
	atom	4147	NZ	LYS	533	41.698	-11.513	45.157	1.00	44.85
	atom	4148	C	LYS	533	45.011	-7.756	50.192	1.00	31.83
	atom	4149	O	LYS	533	44.675	-7.730	51.379	1.00	35.38
	atom	4150	N	LEU	534	45.740	-6.802	49.617	1.00	33.43
	atom	4151	CA	LEU	534	46.114	-5.612	50.356	1.00	32.27
	atom	4152	CB	LEU	534	47.513	-5.139	49.991	1.00	32.44
	atom	4153	CG	LEU	534	48.037	-5.315	48.578	1.00	34.97
	atom	4154	CD1	LEU	534	47.645	-4.103	47.772	1.00	34.56
	atom	4155	CD2	LEU	534	49.569	-5.471	48.610	1.00	35.12
	atom	4156	C	LEU	534	45.083	-4.561	49.998	1.00	34.18
	atom	4157	O	LEU	534	44.411	-4.681	48.980	1.00	34.37
	atom	4158	N	LYS	535	44.920	-3.555	50.854	1.00	36.93
	atom	4159	CA	LYS	535	43.940	-2.496	50.608	1.00	34.07
	atom	4160	CB	LYS	535	43.474	-1.884	51.937	1.00	36.24
	atom	4161	CG	LYS	535	41.961	-1.856	52.123	1.00	37.70
	atom	4162	CD	LYS	535	41.382	-0.469	51.833	1.00	44.20
	atom	4163	CE	LYS	535	41.619	0.509	53.015	1.00	48.89

	atom	4164	NZ	LYS	535	41.741	1.970	52.655	1.00	38.65
	atom	4165	C	LYS	535	44.552	-1.416	49.724	1.00	33.20
	atom	4166	O	LYS	535	45.443	-0.667	50.150	1.00	33.26
	atom	4167	N	LEU	536	44.066	-1.327	48.493	1.00	31.05
	atom	4168	CA	LEU	536	44.590	-0.343	47.553	1.00	29.37
	atom	4169	CB	LEU	536	44.178	-0.716	46.133	1.00	21.07
	atom	4170	CG	LEU	536	44.868	-2.010	45.726	1.00	19.16
	atom	4171	CD1	LEU	536	44.465	-2.414	44.314	1.00	16.03
	atom	4172	CD2	LEU	536	46.376	-1.813	45.839	1.00	17.67
	atom	4173	C	LEU	536	44.173	1.089	47.863	1.00	29.84
	atom	4174	O	LEU	536	42.996	1.379	48.062	1.00	30.05
	atom	4175	N	THR	537	45.164	1.971	47.931	1.00	29.72
	atom	4176	CA	THR	537	44.936	3.387	48.187	1.00	31.92
	atom	4177	CB	THR	537	45.992	3.984	49.146	1.00	35.33
	atom	4178	OG1	THR	537	47.076	4.530	48.379	1.00	37.12
	atom	4179	CG2	THR	537	46.520	2.922	50.109	1.00	38.87
	atom	4180	C	THR	537	45.080	4.081	46.835	1.00	31.62
	atom	4181	O	THR	537	45.870	3.651	46.000	1.00	30.79
	atom	4182	N	PRO	538	44.312	5.150	46.598	1.00	29.61
	atom	4183	CD	PRO	538	43.294	5.782	47.454	1.00	31.17
	atom	4184	CA	PRO	538	44.442	5.820	45.303	1.00	30.27
	atom	4185	CB	PRO	538	43.648	7.105	45.487	1.00	31.22
	atom	4186	CG	PRO	538	42.589	6.717	46.501	1.00	32.38
	atom	4187	C	PRO	538	45.902	6.053	44.948	1.00	30.78
	atom	4188	O	PRO	538	46.696	6.474	45.791	1.00	30.16
	atom	4189	N	ILE	539	46.257	5.738	43.704	1.00	29.56
	atom	4190	CA	ILE	539	47.623	5.897	43.252	1.00	31.04
	atom	4191	CB	ILE	539	47.850	5.283	41.847	1.00	31.49
	atom	4192	CG2	ILE	539	49.251	5.588	41.376	1.00	23.86
	atom	4193	CG1	ILE	539	47.657	3.763	41.898	1.00	32.36
	atom	4194	CD1	ILE	539	47.145	3.144	40.600	1.00	32.68
	atom	4195	C	ILE	539	47.952	7.369	43.222	1.00	35.10
	atom	4196	O	ILE	539	47.261	8.161	42.586	1.00	35.54
	atom	4197	N	PRO	540	49.007	7.758	43.938	1.00	41.86
	atom	4198	CD	PRO	540	49.857	6.862	44.746	1.00	44.60
	atom	4199	CA	PRO	540	49.438	9.157	44.002	1.00	46.62

	atom	4200	CB	PRO	540	50.368	9.194	45.214	1.00	47.34
	atom	4201	CG	PRO	540	50.878	7.787	45.355	1.00	45.22
	atom	4202	C	PRO	540	50.131	9.641	42.732	1.00	50.32
	atom	4203	O	PRO	540	50.004	10.802	42.357	1.00	51.55
	atom	4204	N	ALA	541	50.865	8.750	42.074	1.00	52.57
	atom	4205	CA	ALA	541	51.569	9.108	40.849	1.00	56.51
	atom	4206	CB	ALA	541	52.697	8.104	40.594	1.00	59.19
	atom	4207	C	ALA	541	50.618	9.161	39.642	1.00	58.32
	atom	4208	O	ALA	541	50.945	8.670	38.558	1.00	56.50
	atom	4209	N	ALA	542	49.443	9.757	39.843	1.00	60.33
	atom	4210	CA	ALA	542	48.428	9.879	38.792	1.00	60.08
	atom	4211	CB	ALA	542	47.737	8.532	38.576	1.00	61.79
	atom	4212	C	ALA	542	47.386	10.934	39.160	1.00	61.18
	atom	4213	O	ALA	542	46.576	10.718	40.067	1.00	61.25
	atom	4214	N	SER	543	47.402	12.067	38.460	1.00	60.63
	atom	4215	CA	SER	543	46.448	13.147	38.725	1.00	58.38
	atom	4216	CB	SER	543	46.583	13.638	40.174	1.00	56.51
	atom	4217	OG	SER	543	45.517	13.180	40.994	1.00	52.30
	atom	4218	C	SER	543	46.687	14.308	37.765	1.00	58.73
	atom	4219	O	SER	543	47.654	14.211	36.974	1.00	60.31
	atom	4220	CB	LEU	547	43.766	10.663	30.233	1.00	44.72
	atom	4221	CG	LEU	547	44.982	9.968	30.873	1.00	40.24
	atom	4222	CD1	LEU	547	44.642	8.507	31.173	1.00	37.66
	atom	4223	CD2	LEU	547	46.187	10.047	29.942	1.00	38.77
	atom	4224	C	LEU	547	42.600	12.601	29.127	1.00	49.13
	atom	4225	O	LEU	547	41.744	11.801	28.756	1.00	52.94
	atom	4226	N	LEU	547	44.105	13.002	30.990	1.00	45.62
	atom	4227	CA	LEU	547	43.886	12.136	29.802	1.00	48.24
	atom	4228	N	SER	548	42.469	13.912	28.979	1.00	50.98
	atom	4229	CA	SER	548	41.282	14.489	28.365	1.00	52.12
	atom	4230	CB	SER	548	41.144	15.958	28.800	1.00	53.64
	atom	4231	OG	SER	548	42.230	16.743	28.323	1.00	56.66
	atom	4232	C	SER	548	41.290	14.385	26.830	1.00	50.14
	atom	4233	O	SER	548	40.262	14.077	26.226	1.00	47.87
	atom	4234	N	GLY	549	42.451	14.626	26.216	1.00	47.76
	atom	4235	CA	GLY	549	42.569	14.574	24.763	1.00	46.44

	atom	4236	C	GLY	549	42.224	13.253	24.092	1.00	44.17
	atom	4237	O	GLY	549	41.739	13.219	22.959	1.00	45.46
	atom	4238	N	TRP	550	42.464	12.164	24.806	1.00	41.00
	atom	4239	CA	TRP	550	42.218	10.819	24.312	1.00	37.65
	atom	4240	CB	TRP	550	42.500	9.812	25.416	1.00	34.76
	atom	4241	CG	TRP	550	43.938	9.696	25.766	1.00	39.10
	atom	4242	CD2	TRP	550	44.558	8.611	26.455	1.00	38.40
	atom	4243	CE2	TRP	550	45.925	8.925	26.579	1.00	39.60
	atom	4244	CE3	TRP	550	44.091	7.401	26.977	1.00	40.24
	atom	4245	CD1	TRP	550	44.924	10.601	25.507	1.00	38.77
	atom	4246	NE1	TRP	550	46.121	10.148	25.993	1.00	38.94
	atom	4247	CZ2	TRP	550	46.831	8.074	27.210	1.00	39.11
	atom	4248	CZ3	TRP	550	44.987	6.558	27.599	1.00	41.73
	atom	4249	CH2	TRP	550	46.344	6.897	27.709	1.00	40.59
	atom	4250	C	TRP	550	40.802	10.593	23.830	1.00	37.61
	atom	4251	O	TRP	550	40.564	9.871	22.847	1.00	36.37
	atom	4252	N	PHE	551	39.862	11.203	24.540	1.00	35.78
	atom	4253	CA	PHE	551	38.460	11.035	24.230	1.00	33.03
	atom	4254	CB	PHE	551	37.794	10.320	25.404	1.00	29.53
	atom	4255	CG	PHE	551	38.505	9.050	25.811	1.00	23.88
	atom	4256	CD1	PHE	551	39.419	9.042	26.862	1.00	24.97
	atom	4257	CD2	PHE	551	38.262	7.855	25.136	1.00	25.74
	atom	4258	CE1	PHE	551	40.084	7.841	27.242	1.00	22.29
	atom	4259	CE2	PHE	551	38.917	6.654	25.504	1.00	18.38
	atom	4260	CZ	PHE	551	39.824	6.653	26.553	1.00	19.51
	atom	4261	C	PHE	551	37.773	12.354	23.891	1.00	34.19
	atom	4262	O	PHE	551	36.869	12.820	24.594	1.00	34.13
	atom	4263	N	VAL	552	38.228	12.931	22.780	1.00	30.57
	atom	4264	CA	VAL	552	37.723	14.188	22.253	1.00	28.28
	atom	4265	CB	VAL	552	38.906	15.099	21.876	1.00	29.76
	atom	4266	CG1	VAL	552	38.446	16.182	20.928	1.00	29.48
	atom	4267	CG2	VAL	552	39.543	15.697	23.136	1.00	25.77
	atom	4268	C	VAL	552	36.859	13.920	20.998	1.00	26.36
	atom	4269	O	VAL	552	35.744	14.420	20.870	1.00	25.36
	atom	4270	N	ALA	553	37.380	13.109	20.088	1.00	23.25
	atom	4271	CA	ALA	553	36.686	12.782	18.848	1.00	22.46

atom	4272	CB	ALA	553	36.899	13.893	17.825	1.00	18.90
atom	4273	C	ALA	553	37.217	11.472	18.284	1.00	20.46
atom	4274	O	ALA	553	38.274	10.997	18.698	1.00	18.33
atom	4275	N	GLY	554	36.476	10.899	17.338	1.00	19.17
atom	4276	CA	GLY	554	36.898	9.665	16.705	1.00	16.97
atom	4277	C	GLY	554	37.776	10.001	15.511	1.00	20.33
atom	4278	O	GLY	554	37.577	11.026	14.858	1.00	19.16
atom	4279	N	TYR	555	38.742	9.137	15.210	1.00	23.04
atom	4280	CA	TYR	555	39.646	9.392	14.100	1.00	25.21
atom	4281	CB	TYR	555	40.940	10.002	14.628	1.00	20.58
atom	4282	CG	TYR	555	40.744	11.360	15.240	1.00	19.91
atom	4283	CD1	TYR	555	40.773	11.538	16.626	1.00	17.94
atom	4284	CE1	TYR	555	40.694	12.819	17.187	1.00	19.72
atom	4285	CD2	TYR	555	40.618	12.482	14.434	1.00	17.97
atom	4286	CE2	TYR	555	40.538	13.748	14.974	1.00	17.90
atom	4287	CZ	TYR	555	40.589	13.913	16.342	1.00	18.90
atom	4288	OH	TYR	555	40.617	15.183	16.835	1.00	25.09
atom	4289	C	TYR	555	40.003	8.215	13.205	1.00	28.92
atom	4290	O	TYR	555	40.949	8.312	12.421	1.00	31.99
atom	4291	N	SER	556	39.284	7.103	13.290	1.00	33.24
atom	4292	CA	SER	556	39.651	5.994	12.415	1.00	38.78
atom	4293	CB	SER	556	39.055	4.667	12.909	1.00	39.01
atom	4294	OG	SER	556	37.649	4.728	13.052	1.00	48.39
atom	4295	C	SER	556	39.197	6.293	10.989	1.00	38.63
atom	4296	O	SER	556	37.968	6.295	10.754	1.00	39.41
atom	4297	OT	SER	556	40.082	6.536	10.136	1.00	36.08
atom	4298	O	HOH	601	46.597	10.920	10.721	1.00	20.01
atom	4299	O	HOH	602	22.175	2.399	-11.303	1.00	35.10
atom	4300	O	HOH	603	22.555	-6.018	20.759	1.00	25.15
atom	4301	O	HOH	604	10.699	23.284	3.535	1.00	14.14
atom	4302	O	HOH	605	33.779	-15.862	-12.840	1.00	31.49
atom	4303	O	HOH	606	23.250	-5.255	39.290	1.00	18.63
atom	4304	O	HOH	607	56.607	18.994	13.165	1.00	30.49
atom	4305	O	HOH	608	32.158	-6.088	14.607	1.00	25.10
atom	4306	O	HOH	609	56.341	-19.171	32.102	1.00	30.17
atom	4307	O	HOH	610	42.183	-16.676	46.222	1.00	38.72

```
      atom   4308  O   HOH   611      45.029   9.354   9.054  1.00 40.93
      atom   4309  O   HOH   612      47.451  26.726   6.177  1.00 45.21
      atom   4310  O   HOH   613       2.470  -1.802  27.736  1.00 36.07
      atom   4311  O   HOH   614      47.043  21.787  16.034  1.00 22.90
 5    atom   4312  O   HOH   615      34.075  17.253  18.692  1.00 20.89
      atom   4313  O   HOH   616      50.817  23.460 -12.759  1.00 39.31
      atom   4314  O   HOH   617      38.747   2.676   9.078  1.00 27.53
      atom   4315  O   HOH   618      35.002   0.690  23.109  1.00 14.10
      atom   4316  O   HOH   619      52.799  16.218  -9.314  1.00 38.86
10    atom   4317  O   HOH   620      57.492  32.252  19.690  1.00 49.50
      atom   4318  O   HOH   621      24.538  -2.398 -12.767  1.00 35.01
      atom   4319  O   HOH   622      45.774 -26.860  17.172  1.00 39.39
      atom   4320  O   HOH   623      16.918  -0.379  -0.855  1.00 49.13
      atom   4321  O   HOH   624      35.816 -18.589   0.233  1.00 38.14
15    atom   4322  O   HOH   625      48.368  29.897  14.750  1.00 20.40
      atom   4323  O   HOH   626      36.518   3.819  41.949  1.00 13.51
      atom   4324  O   HOH   627      43.658   6.306 -16.389  1.00 40.16
      atom   4325  O   HOH   628      48.323  10.990   7.196  1.00 22.08
      atom   4326  O   HOH   629      38.139 -19.255  43.774  1.00 42.98
20    atom   4327  O   HOH   630      34.071   6.076  12.772  1.00 22.46
      atom   4328  O   HOH   631      58.322  10.881  14.337  1.00 40.76
      atom   4329  O   HOH   632      26.691  26.778   4.448  1.00 27.91
      atom   4330  O   HOH   633      53.979  24.631  19.675  1.00 51.22
      atom   4331  O   HOH   634       2.628   2.180  11.312  1.00 34.19
25    atom   4332  O   HOH   635       5.149  14.418  28.631  1.00 37.35
      atom   4333  O   HOH   636      32.587  -3.817  12.697  1.00 56.26
      atom   4334  O   HOH   637      27.170  -9.280  31.802  1.00 23.11
      atom   4335  O   HOH   638      43.450   5.359  10.944  1.00 34.66
      atom   4336  O   HOH   639      26.062 -12.225  14.751  1.00 51.30
30    atom   4337  O   HOH   640      14.706   7.497  -5.096  1.00 16.79
      atom   4338  O   HOH   641      57.477 -14.762  35.981  1.00 28.11
      atom   4339  O   HOH   642      51.547   9.783  48.172  1.00 51.98
      atom   4340  O   HOH   643      30.933  -6.757  -7.733  1.00 33.60
      atom   4341  O   HOH   644      25.070  13.151   5.827  1.00  2.00
35    atom   4342  O   HOH   645      56.672 -10.309  18.187  1.00 43.18
      atom   4343  O   HOH   646      11.579  20.415   6.160  1.00 25.47
```

	atom	4344	O	HOH	647	27.916	-15.124	2.287	1.00	16.76
	atom	4345	O	HOH	648	35.221	2.326	34.458	1.00	24.56
	atom	4346	O	HOH	649	38.312	9.262	36.937	1.00	66.40
	atom	4347	O	HOH	650	46.258	6.938	4.683	1.00	22.44
5	atom	4348	O	HOH	651	42.606	-3.262	36.649	1.00	19.82
	atom	4349	O	HOH	652	40.235	11.518	20.853	1.00	29.01
	atom	4350	O	HOH	653	22.794	25.287	5.447	1.00	26.51
	atom	4351	O	HOH	654	38.206	9.504	-13.291	1.00	27.81
	atom	4352	O	HOH	655	45.226	13.150	18.803	1.00	18.98
10	atom	4353	O	HOH	656	33.031	-18.621	22.852	1.00	44.30
	atom	4354	O	HOH	657	9.650	-6.271	22.144	1.00	31.46
	atom	4355	O	HOH	658	30.463	24.471	-1.145	1.00	21.85
	atom	4356	O	HOH	659	41.452	8.031	8.619	1.00	18.26
	atom	4357	O	HOH	660	24.327	5.781	5.531	1.00	13.96
15	atom	4358	O	HOH	661	47.983	6.984	-10.411	1.00	58.11
	atom	4359	O	HOH	662	30.966	-22.909	5.590	1.00	33.72
	atom	4360	O	HOH	663	33.405	-1.565	17.123	1.00	40.26
	atom	4361	O	HOH	664	21.076	7.717	-8.594	1.00	36.41
	atom	4362	O	HOH	665	16.982	24.733	15.974	1.00	32.75
20	atom	4363	O	HOH	666	26.953	23.531	1.354	1.00	26.84
	atom	4364	O	HOH	667	40.572	-13.743	44.640	1.00	36.89
	atom	4365	O	HOH	668	31.441	0.335	7.724	1.00	38.18
	atom	4366	O	HOH	669	47.678	-7.636	13.712	1.00	29.88
	atom	4367	O	HOH	670	46.557	22.825	-11.411	1.00	60.36
25	atom	4368	O	HOH	671	21.234	10.081	-2.885	1.00	10.30
	atom	4369	O	HOH	672	31.211	-1.023	4.408	1.00	21.50
	atom	4370	O	HOH	673	50.141	-6.813	-11.682	1.00	20.49
	atom	4371	O	HOH	674	33.244	15.024	-9.889	1.00	70.47
	atom	4372	O	HOH	675	38.979	11.058	31.410	1.00	25.50
30	atom	4373	O	HOH	676	34.118	11.305	3.467	1.00	26.54
	atom	4374	O	HOH	677	46.763	-27.510	31.664	1.00	53.08
	atom	4375	O	HOH	678	35.099	2.565	8.047	1.00	27.70
	atom	4376	O	HOH	679	9.176	25.088	4.798	1.00	15.87
	atom	4377	O	HOH	680	14.704	13.412	25.182	1.00	44.92
35	atom	4378	O	HOH	681	6.438	4.023	3.328	1.00	50.32
	atom	4379	O	HOH	682	32.219	15.747	2.622	1.00	34.73

	atom	4380	O	HOH	683	31.014	-13.129	15.368	1.00	36.61
	atom	4381	O	HOH	684	41.423	22.998	-13.412	1.00	45.74
	atom	4382	O	HOH	685	41.073	14.541	32.544	1.00	50.00
	atom	4383	O	HOH	686	41.923	30.239	10.109	1.00	22.37
	atom	4384	O	HOH	687	13.043	1.835	1.524	1.00	39.14
	atom	4385	O	HOH	688	36.384	1.728	2.325	1.00	21.15
	atom	4386	O	HOH	689	38.926	-12.759	41.527	1.00	23.54
	atom	4387	O	HOH	690	13.533	4.342	-1.256	1.00	54.72
	atom	4388	O	HOH	691	42.859	-30.767	29.292	1.00	47.18
	atom	4389	O	HOH	692	46.981	-5.614	-11.265	1.00	28.15
	atom	4390	O	HOH	693	34.904	-2.672	2.841	1.00	23.02
	atom	4391	O	HOH	694	22.975	23.743	2.224	1.00	36.23
	atom	4392	O	HOH	695	45.861	14.150	31.270	1.00	36.10
	atom	4393	O	HOH	696	46.016	15.972	22.828	1.00	83.63
	atom	4394	O	HOH	697	13.753	-0.702	38.177	1.00	52.18
	atom	4395	O	HOH	698	34.502	16.040	22.414	1.00	28.47
	atom	4396	O	HOH	699	22.706	27.973	10.089	1.00	32.01
	atom	4397	O	HOH	700	63.426	-24.001	17.375	1.00	39.17
	atom	4398	O	HOH	701	34.349	9.690	1.548	1.00	8.53
	atom	4399	O	HOH	702	41.163	2.343	49.912	1.00	25.54
	atom	4400	O	HOH	703	9.851	15.333	21.500	1.00	55.28
	atom	4401	O	HOH	704	44.019	27.355	14.119	1.00	20.72
	atom	4402	O	HOH	705	47.294	-8.487	10.420	1.00	30.76
	atom	4403	O	HOH	706	-0.567	-15.964	21.058	1.00	63.56
	atom	4404	O	HOH	707	45.139	17.223	28.013	1.00	39.75
	atom	4405	O	HOH	708	54.938	29.596	18.826	1.00	44.62
	atom	4406	O	HOH	709	56.658	-1.774	11.129	1.00	58.40
	atom	4407	O	HOH	710	41.378	-2.253	48.336	1.00	78.97
	atom	4408	O	HOH	711	34.016	0.844	32.187	1.00	17.40
	atom	4409	O	HOH	712	40.079	23.922	18.790	1.00	39.02
	atom	4410	O	HOH	713	23.939	16.548	-6.662	1.00	72.72
	atom	4411	O	HOH	714	43.805	-5.760	37.997	1.00	30.43
	atom	4412	O	HOH	715	43.983	12.763	7.024	1.00	45.03
	atom	4413	O	HOH	716	17.467	-6.790	34.490	1.00	49.51
	atom	4414	O	HOH	717	57.128	-9.673	7.961	1.00	49.41
	atom	4415	O	HOH	718	28.310	-13.504	15.674	1.00	33.16

	atom	4416	O	HOH	719	48.350	12.483	24.005	1.00	63.80
	atom	4417	O	HOH	720	19.085	8.242	-9.951	1.00	27.67
	atom	4418	O	HOH	721	55.772	11.621	19.184	1.00	36.44
	atom	4419	O	HOH	722	7.019	15.603	32.528	1.00	58.28
	atom	4420	O	HOH	723	36.866	-13.652	15.802	1.00	25.85
	atom	4421	O	HOH	724	43.517	24.315	-12.119	1.00	32.19
	atom	4422	O	HOH	725	37.708	-15.785	39.175	1.00	55.43
	atom	4423	O	HOH	726	5.217	0.089	34.330	1.00	62.37
	atom	4424	O	HOH	727	22.932	16.773	24.935	1.00	35.34
	atom	4425	O	HOH	728	57.302	-9.957	-7.609	1.00	26.80
	atom	4426	O	HOH	729	7.732	5.303	-6.078	1.00	76.68
	atom	4427	O	HOH	730	20.565	18.229	-3.485	1.00	33.65
	atom	4428	O	HOH	731	40.313	14.721	37.485	1.00	47.03
	atom	4429	O	HOH	732	45.334	-26.610	3.300	1.00	50.49
	atom	4430	O	HOH	733	21.456	12.342	33.566	1.00	43.49
	atom	4431	O	HOH	734	53.572	28.112	-7.495	1.00	33.68
	atom	4432	O	HOH	735	44.392	3.535	-16.228	1.00	27.03
	atom	4433	O	HOH	736	21.788	26.910	17.354	1.00	30.54
	atom	4434	O	HOH	737	1.982	-17.218	22.679	1.00	30.22
	atom	4435	O	HOH	738	49.791	-14.945	51.490	1.00	27.60
	atom	4436	O	HOH	739	65.383	-10.773	31.724	1.00	18.74
	atom	4437	O	HOH	740	48.882	-23.983	38.693	1.00	26.12
	atom	4438	O	HOH	741	38.324	18.978	30.698	1.00	50.04
	atom	4439	O	HOH	742	18.500	12.871	19.098	1.00	36.88
	atom	4440	O	HOH	743	43.444	-24.077	3.285	1.00	34.36
	atom	4441	O	HOH	744	19.073	14.997	20.678	1.00	31.13
	atom	4442	O	HOH	745	43.718	14.040	-9.258	1.00	51.15
	atom	4443	O	HOH	746	19.757	12.108	21.932	1.00	15.58
	atom	4444	O	HOH	747	28.539	-1.306	9.121	1.00	21.43
	atom	4445	O	HOH	748	33.299	13.289	28.355	1.00	28.80
	atom	4446	O	HOH	749	55.796	5.609	21.850	1.00	24.06
	atom	4447	O	HOH	750	71.236	-9.462	30.197	1.00	17.23
	atom	4448	O	HOH	751	48.317	16.021	28.186	1.00	58.54
	atom	4449	O	HOH	752	37.023	-14.017	-12.141	1.00	69.73
	atom	4450	O	HOH	753	47.056	10.022	14.240	1.00	15.11
	atom	4451	O	HOH	754	41.937	-14.514	-12.014	1.00	26.85

	atom	4452	O	HOH	755	58.191	18.257	-4.318	1.00	24.13
	atom	4453	O	HOH	756	34.855	15.167	-13.410	1.00	26.27
	atom	4454	O	HOH	757	46.083	7.332	-4.348	1.00	36.21
	atom	4455	O	HOH	758	34.334	19.475	20.562	1.00	36.18
	atom	4456	O	HOH	759	48.439	12.298	18.766	1.00	34.56
	atom	4457	O	HOH	760	26.446	9.654	-7.040	1.00	24.61
	atom	4458	O	HOH	761	43.303	7.883	-11.435	1.00	28.14
	atom	4459	O	HOH	762	20.443	18.574	16.107	1.00	41.22
	atom	4460	O	HOH	763	48.286	15.033	32.831	1.00	54.24
	atom	4461	O	HOH	764	10.893	18.980	16.387	1.00	64.94
	atom	4462	O	HOH	765	34.601	4.808	35.497	1.00	44.93
	atom	4463	O	HOH	766	31.888	17.167	-8.403	1.00	46.54
	atom	4464	O	HOH	767	36.373	-3.491	21.106	1.00	11.94
	atom	4465	O	HOH	768	23.246	19.202	-6.517	1.00	36.95
	atom	4466	O	HOH	769	45.743	17.021	-5.597	1.00	30.65
	atom	4467	O	HOH	770	33.244	-13.586	18.326	1.00	36.91
	atom	4468	O	HOH	771	57.928	30.606	16.929	1.00	37.65
	atom	4469	O	HOH	772	69.124	-11.949	27.989	1.00	64.91
	atom	4470	O	HOH	773	29.727	-22.652	27.281	1.00	33.38
	atom	4471	O	HOH	774	37.839	-4.465	13.760	1.00	19.35
	atom	4472	O	HOH	775	41.248	-0.915	16.241	1.00	51.54
	atom	4473	O	HOH	776	32.612	-23.200	24.163	1.00	46.86
	atom	4474	O	HOH	777	47.550	17.765	-7.284	1.00	31.71
	atom	4475	O	HOH	778	22.460	12.258	5.644	1.00	11.08
	atom	4476	O	HOH	779	6.843	19.969	17.253	1.00	24.17
	atom	4477	O	HOH	780	-1.037	0.592	12.041	1.00	34.59
	atom	4478	O	HOH	781	16.879	16.213	-1.036	1.00	30.44
	atom	4479	O	HOH	782	4.952	-10.654	24.420	1.00	72.34
	atom	4480	O	HOH	783	30.976	21.960	23.463	1.00	22.72
	atom	4481	O	HOH	784	54.549	-16.852	43.639	1.00	40.59
	atom	4482	O	HOH	785	35.858	0.543	37.145	1.00	32.03
	atom	4483	O	HOH	786	37.629	0.228	45.081	1.00	28.19
	atom	4484	O	HOH	787	34.090	-24.595	29.357	1.00	39.75
	atom	4485	O	HOH	788	51.277	31.211	-7.019	1.00	40.56
	atom	4486	O	HOH	789	30.912	-2.933	10.609	1.00	68.41
	atom	4487	O	HOH	790	58.746	-7.303	-10.029	1.00	56.52

	atom	4488	O	HOH	791	53.940	14.157	19.431	1.00	35.48
	atom	4489	O	HOH	792	32.011	-0.149	14.251	1.00	44.98
	atom	4490	O	HOH	793	13.553	23.341	8.528	1.00	57.29
	atom	4491	O	HOH	794	37.675	-7.811	-8.912	1.00	41.38
	atom	4492	O	HOH	795	48.715	-0.365	3.142	1.00	38.14
	atom	4493	O	HOH	796	50.589	-16.659	6.378	1.00	17.87
	atom	4494	O	HOH	797	44.199	-19.067	6.859	1.00	36.65
	atom	4495	O	HOH	798	53.441	-26.855	20.517	1.00	47.04
	atom	4496	O	HOH	799	49.408	-26.628	20.724	1.00	45.80
	atom	4497	O	HOH	800	52.640	-19.756	30.198	1.00	44.69
	atom	4498	O	HOH	801	18.857	3.501	-9.706	1.00	23.78
	atom	4499	O	HOH	802	17.896	1.182	-11.952	1.00	30.55
	atom	4500	O	HOH	803	13.919	4.000	-10.397	1.00	44.06
	atom	4501	O	HOH	804	11.557	5.995	-4.803	1.00	46.81
	atom	4502	O	HOH	805	11.140	9.279	7.880	1.00	25.27
	atom	4503	O	HOH	806	18.676	16.664	2.033	1.00	34.23
	atom	4504	O	HOH	807	27.433	31.963	16.774	1.00	19.82
	atom	4505	O	HOH	808	53.253	29.573	9.882	1.00	32.20
	atom	4506	O	HOH	809	54.907	28.009	11.555	1.00	48.61
	atom	4507	O	HOH	810	62.641	11.739	-4.252	1.00	27.80
	atom	4508	O	HOH	811	65.068	5.329	5.372	1.00	48.92
	atom	4509	O	HOH	812	65.803	8.849	4.108	1.00	40.60
	atom	4510	O	HOH	813	43.721	20.002	-11.175	1.00	30.13
	atom	4511	O	HOH	814	34.406	-17.139	17.170	1.00	40.53
	atom	4512	O	HOH	815	34.703	-23.625	4.105	1.00	56.99
	atom	4513	O	HOH	816	34.197	-17.469	3.287	1.00	37.76
	atom	4514	O	HOH	817	50.104	7.478	-2.288	1.00	24.32
	atom	4515	O	HOH	818	41.677	18.551	18.796	1.00	48.99
	atom	4516	O	HOH	819	38.682	19.681	20.416	1.00	39.70
	atom	4517	O	HOH	820	11.768	4.457	37.706	1.00	49.72
	atom	4518	O	HOH	821	8.218	0.919	37.720	1.00	51.30
	atom	4519	O	HOH	822	3.397	-1.753	33.199	1.00	33.21
	atom	4520	O	HOH	823	34.080	1.178	3.231	1.00	31.80
	atom	4521	O	HOH	824	31.348	10.501	-7.664	1.00	31.34
	atom	4522	O	HOH	825	38.108	4.850	-12.161	1.00	29.51
	atom	4523	O	HOH	826	38.982	10.342	10.406	1.00	33.39

	atom	4524	O	HOH	827	5.149	5.654	13.265	1.00	32.14
	atom	4525	O	HOH	828	6.416	-8.088	20.222	1.00	47.29
	atom	4526	O	HOH	829	-1.858	-3.132	18.913	1.00	33.76
	atom	4527	O	HOH	830	11.873	9.162	4.510	1.00	29.14
	atom	4528	O	HOH	831	19.232	-5.660	17.559	1.00	26.47
	atom	4529	O	HOH	832	12.983	-8.915	15.306	1.00	38.14
	atom	4530	O	HOH	833	18.416	-11.585	21.008	1.00	36.30
	atom	4531	O	HOH	834	22.507	-3.262	33.451	1.00	75.72
	atom	4532	O	HOH	835	26.191	-1.017	24.576	1.00	27.57
	atom	4533	O	HOH	836	36.425	-0.682	16.799	1.00	23.81
	atom	4534	O	HOH	837	36.167	2.136	19.428	1.00	32.23
	atom	4535	O	HOH	838	31.892	-9.361	18.329	1.00	33.94
	atom	4536	O	HOH	839	29.958	0.247	50.234	1.00	37.67
	atom	4537	O	HOH	840	25.664	-2.880	45.446	1.00	33.38
	atom	4538	O	HOH	841	28.111	-11.787	23.722	1.00	21.13
	atom	4539	O	HOH	842	25.802	-13.741	20.864	1.00	59.80
	atom	4540	O	HOH	843	66.721	-13.408	27.755	1.00	48.15
	atom	4541	O	HOH	844	64.307	-3.316	36.898	1.00	32.54
	atom	4542	O	HOH	845	65.583	-0.436	36.938	1.00	38.32
	atom	4543	O	HOH	846	41.048	-10.431	50.836	1.00	30.07
	atom	4544	O	HOH	847	41.737	18.341	25.701	1.00	64.24
	atom	4545	O	HOH	848	30.918	-2.921	-11.856	1.00	30.91
	atom	4546	O	HOH	849	51.446	22.839	17.216	1.00	39.81
	atom	4547	O	HOH	850	60.785	2.614	-0.874	1.00	39.73
	atom	4548	O	HOH	851	56.838	-0.895	2.586	1.00	48.94
	atom	4549	O	HOH	852	47.396	10.491	-8.843	1.00	52.91
	atom	4550	O	HOH	853	38.574	-14.690	4.444	1.00	33.09
	atom	4551	O	HOH	854	18.756	-0.542	39.542	1.00	42.46
	atom	4552	O	HOH	855	29.513	29.579	6.595	1.00	32.61
	atom	4553	O	HOH	856	32.813	33.195	8.357	1.00	29.66
	atom	4554	O	HOH	857	40.705	7.094	-13.994	1.00	34.72
	atom	4555	O	HOH	858	50.499	1.421	-2.924	1.00	29.88
	atom	4556	O	HOH	859	47.470	0.293	-15.630	1.00	28.11
	atom	4557	O	HOH	860	46.826	-4.091	15.608	1.00	26.81
	atom	4558	O	HOH	861	43.465	-1.915	20.388	1.00	51.80
	atom	4559	O	HOH	862	39.396	-8.251	42.274	1.00	26.63

atom	4560	O	HOH	863	62.025	-4.244	31.799	1.00	22.81
atom	4561	O	HOH	864	51.328	10.747	31.485	1.00	37.10
atom	4562	O	HOH	865	35.283	7.979	42.362	1.00	44.09
atom	4563	O	HOH	866	57.095	-18.565	40.803	1.00	52.67
atom	4564	O	HOH	867	58.155	-2.683	46.266	1.00	25.42
atom	4565	O	HOH	868	48.057	20.382	-12.222	1.00	43.57
atom	4566	O	HOH	869	49.547	0.925	0.838	1.00	46.43
atom	4567	O	HOH	870	46.392	4.053	4.644	1.00	44.93
atom	4568	O	HOH	871	17.601	15.375	19.352	1.00	51.47
atom	4569	O	HOH	872	4.479	9.329	31.775	1.00	34.27
atom	4570	O	HOH	873	22.319	18.788	-0.495	1.00	26.21
atom	4571	O	HOH	874	35.839	30.245	-0.342	1.00	43.59
atom	4572	O	HOH	875	48.453	2.849	-6.547	1.00	33.89
atom	4573	O	HOH	876	0.605	7.424	25.945	1.00	35.66
atom	4574	O	HOH	877	2.396	-3.829	13.234	1.00	30.55
atom	4575	O	HOH	878	14.152	-2.287	5.419	1.00	22.67
atom	4576	O	HOH	879	35.704	-8.865	16.297	1.00	31.24
atom	4577	O	HOH	880	47.890	11.218	33.219	1.00	46.36
atom	4578	O	HOH	881	35.361	8.156	33.971	1.00	44.67
atom	4579	O	HOH	882	40.052	7.610	41.373	1.00	36.44
atom	4580	O	HOH	883	56.929	-15.208	46.351	1.00	46.04
atom	4581	O	HOH	884	52.052	-0.414	49.836	1.00	47.74

[0022]

The structure of the HCV polymerase was visualized using the program software RasMol (Free Soft, Roger Sayle, Glaxo Research & Development, Greenford, Middlesex, UK) (Fig. 1).

The HCV polymerase belongs to the space group of $P4_32_12$ of a = b = 63.7 Å, c = 262.9 Å, and is 67 x 63 x 68 Å spherical protein comprising the cone shape in the structure. The HCV polymerase has a glove-like structure shown in Fig. 1, comprising Fingers, Palm, Thumb, and Holder domains.

The Holder domain had an unknown structure, which had not been found even in the poliovirus (Structure 5, 1109-1122 (1997)).

Fig. 2 schematically shows the structure of the HCV polymerase.

The Finger domain comprises four ? sheets and one ? helix, similar

to the structure of the HIV reverse transcriptase, although there is no amino acid sequence similarity to this enzyme. There are two long loops (one loop extending from the N-terminus to ? A helix, and the other loop between ?1 and ?2), and a reticular net is formed from the lower part of the cone shape to the upper end of the Thumb domain. The lower part of the net is open, and presumably is the entrance for the substrate ribonucleoside triphosphate (rNTP).

As described above, in the crystal structure of the poliovirus polymerase (Structure 5, 1109-1122 (1997)), the structure of the Finger domain is disordered except for the net end containing a short helix in which the Finger domain extends to the Thumb domain. The region corresponding to the connecting region between the Holder and Palm domains in the HCV polymerase was identified as the Finger domain, however, most of the rest of the structure in the Finger domain has not been revealed yet.

The Holder domain consists of two helixes, ?H and ?I, located as if supporting this region, a part of each of ?C, ?D, ?E, and ?F, and a long loop that looks like it is inserted into the Finger and Palm domains between ?D and ?E. This domain forms a valley which is one wall of the cone shape between the Palm domain and this domain, and the U-shaped valley between the Finger domain and the domain. In two valleys, basic amino acid residues align, which are positively charged. The positively charged surface conveniently binds to a negatively charged template, and therefore, the U-shaped valley is considered to be an entrance for template RNA.

The Palm domain comprises a structure similar to HIV reverse transcriptase, *E. coli*, or Taq DNA-dependent DNA polymerase and T7 DNA-dependent polymerase.

The Thumb domain consists of six binding helixes, ?P helix, two distorted ? sheets connecting to the Palm domain. The core structure of this domain comprises a structure similar to the HIV reverse transcriptase. The ? sheet extending from the apex of the Thumb domain consists of nonhydrophilic residues, except for the hydrophilic junction, and hangs down to the center of the cone shape, as if pushing the C-terminal nonhydrophilic region. This characteristic long apex is not observed in other polymerases. In

fact, the C-terminus-deficient variant has a reportedly high RNA-dependent RNA polymerase activity (J. Virol. 73, 1649-54 (1999)). C-terminal nonhydrophilic region is thought to be involved with membrane adhesion and to have a function in stabilizing the cone shape.

The N-terminus of the HCV polymerase forms a mimic ? sheet at the center of the Finger domain with ?5. This means that N-terminus-truncated variants lose the replicase activity.

[0023]

[Example 3]

Determination of the active site and the additional inhibitor-binding site in the HCV polymerase

As described above, the Palm domain of the HCV polymerase has a structure similar to HIV reverse transcriptase, *E. coli* or Taq DNA-dependent DNA polymerase, and T7 DNA-dependent polymerase. Comparison of the conserved region between the active site of these known Palm domains and the Palm domain of the HCV polymerase deduced that the active site is

(1) the space formed by Asp 220, 318, and 319, and conserved residues between ?1 and ?2 of the Fingers domain, Lys 141 and Arg 158, and

(2) the hydrophilic cavity, receiving 2'-OH in ribose of rNTP, formed by Ser 282, Thr 287, and Asn 291, conserved in proximity to position 225.

Fig. 3 compares the amino acid sequences of the HCV polymerase, poliovirus polymerase, and HIV reverse transcriptase. HCV, POLIO, and HIVRT in the figure indicate HCV polymerase, poliovirus polymerase, and HIV reverse transcriptase, respectively. The underlined sequences indicate the parts where the structures have not been clarified by the above structure analysis.

Asp 225 corresponds to Tyr 115 of the HIV reverse transcriptase and this difference of the amino acids presumably determines whether the substrate is rNTP or dNTP. Arg 158 and Lys 141, the conserved residues between ?1 and ?2 of the Fingers domain, would have an important role in the binding of rNTP.

The Thumb domain of the HCV polymerase can structurally move against the Palm and Fingers domains and this movement results in

the inner space of the Palm domain. This space was confirmed to be formed by the regions of amino acids 213 to 223, 310 to 325, and 348 to 366, by considering the crystal structure thereof. A compound existing in this space presumably inhibits the spatial formation. It is rationally assumed that the above-described region of the Palm domain is an additional inhibitor-binding site. The inner space was revealed to be an additional inhibitor-binding site for HCV polymerase. The region may thus shift 1 to 20, preferably 1 to 10, and more preferably 1 to 5 amino acids.

Lys 90, 98, and 172, and Arg 106 and 168 in the Holder domain, Arg 48 in the Finger domain, and Arg 465 in the Thumb domain are located within 5 Å from the phosphodiester of the template in the template/primer binding model. These amino acids would have an important role on the binding of the template/primer.

[0024]

[Effects of the Invention]

The present invention allows the selection of compounds having HCV polymerase-inhibiting activity using computers and such. A leading compound and derivative peripheral compounds can be rationally designed. Furthermore, in synthesis experiments, useless synthesis can be obviated, and biological activity tests can be efficiently performed.

[0025]

[Sequence Listing]

SEQUENCE LISTING

<110> Japan Tobacco Inc.

<120> HCV polymerase for crystal structure analysis and use of the crystal structure

<130> J99-0086

<140>

<141>

<160> 4

<170> PatentIn Ver. 2.0

<210> 1
<211> 578
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:artificial protein based on HCV polymerase.

<400> 1

Ser Met Ser Tyr Thr Trp Thr Gly Ala Leu Ile Thr Pro Cys Ala Ala
1 5 10 15

Glu Glu Ser Lys Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg
20 25 30

His His Asn Met Val Tyr Ala Thr Thr Ser Arg Ser Ala Gly Leu Arg
35 40 45

Gln Lys Lys Val Thr Phe Asp Arg Leu Gln Val Leu Asp Asp His Tyr
50 55 60

Arg Asp Val Leu Lys Glu Met Lys Ala Lys Ala Ser Thr Val Lys Ala
65 70 75 80

Lys Leu Leu Ser Val Glu Glu Ala Cys Lys Leu Thr Pro Pro His Ser
85 90 95

Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser
100 105 110

Ser Lys Ala Val Asn His Ile His Ser Val Trp Lys Asp Leu Leu Glu
115 120 125

Asp Thr Val Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val
130 135 140

Phe Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile
145 150 155 160

Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr
165 170 175

Asp Val Val Ser Thr Leu Pro Gln Val Val Met Gly Ser Ser Tyr Gly
180 185 190

Phe Gln Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val Asn Thr Trp
195 200 205

Lys Ser Lys Lys Asn Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe
210 215 220

Asp Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr
225 230 235 240

Gln Cys Cys Asp Leu Ala Pro Glu Ala Arg Gln Ala Ile Lys Ser Leu
245 250 255

Thr Glu Arg Leu Tyr Ile Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln
260 265 270

Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser
275 280 285

Cys Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Cys Arg
290 295 300

Ala Ala Lys Leu Gln Asp Cys Thr Met Leu Val Asn Gly Asp Asp Leu
305 310 315 320

Val Val Ile Cys Glu Ser Ala Gly Thr Gln Glu Asp Ala Ala Ser Leu
325 330 335

Arg Val Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp
340 345 350

Pro Pro Gln Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser
355 360 365

Asn Val Ser Val Ala His Asp Ala Ser Gly Lys Arg Val Tyr Tyr Leu
370 375 380

Thr Arg Asp Pro Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala
385 390 395 400

Arg His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Tyr Ala
405 410 415

Pro Thr Leu Trp Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Ile
420 425 430

Leu Leu Ala Gln Glu Gln Leu Glu Lys Ala Leu Asp Cys Gln Ile Tyr
435 440 445

Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Gln Ile Ile Glu
450 455 460

Arg Leu His Gly Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly
465 470 475 480

Glu Ile Asn Arg Val Ala Ser Cys Leu Arg Lys Leu Gly Val Pro Pro
485 490 495

Leu Arg Val Trp Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu
500 505 510

Ser Gln Gly Gly Arg Ala Ala Thr Cys Gly Lys Tyr Leu Phe Asn Trp
515 520 525

Ala Val Lys Thr Lys Leu Lys Leu Thr Pro Ile Pro Ala Ala Ser Gln
530 535 540

Leu Asp Leu Ser Gly Trp Phe Val Ala Gly Tyr Ser Gly Gly Asp Ile
545 550 555 560

Tyr His Ser Leu Ser Arg Ala Arg Pro Arg Gly Ser His His His His
565 570 575

His His

<210> 2
<211> 1743
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificial nucleic acid sequence based on HCV polymerase.

<400> 2
atgtcaatgt cctacacatg gacaggcgcc ttgatcacgc catgcgctgc ggaggaaagc 60
aagctgccca tcaacgcgtt gagcaactct ttgctgcgcc accataacat ggtttatgcc 120
acaacatctc gcagcgcagg cctgcggcag aagaaggtca cctttgacag actgcaagtc 180
ctggacgacc actaccggga cgtgctcaag gagatgaagg cgaaggcgtc cacagttaag 240
gctaaactcc tatccgtaga ggaagcctgc aagctgacgc ccccacattc ggccaaatcc 300
aagtttggct atggggcaaa ggacgtccgg aacctatcca gcaaggccgt taaccacatc 360

cactccgtgt ggaaggactt gctggaagac actgtgacac caattgacac caccatcatg 420
gcaaaaaatg aggttttctg tgtccaacca gagaaaggag gccgtaagcc agcccgcctt 480
atcgtattcc cagatctggg agtccgtgta tgcgagaaga tggccctcta tgatgtggtc 540
tccacccttc ctcaggtcgt gatgggctcc tcatacggat tccagtactc tcctgggcag 600
cgagtcgagt tcctggtgaa tacctggaaa tcaaagaaaa accccatggg cttttcatat 660
gacactcgct gtttcgactc aacggtcacc gagaacgaca tccgtgttga ggagtcaatt 720
taccaatgtt gtgacttggc ccccgaagcc agacaggcca taaaatcgct cacagagcgg 780
ctttatatcg ggggtcctct gactaattca aaagggcaga actgcggtta tcgccggtgc 840
cgcgcgagcg gcgtgctgac gactagctgc ggtaacaccc tcacatgtta cttgaaggcc 900
tctgcagcct gtcgagctgc gaagctccag gactgcacga tgctcgtgaa cggagacgac 960
ctcgtcgtta tctgtgaaag cgcgggaacc caagaggacg cggcgagcct acgagtcttc 1020
acggaggcta tgactaggta ctccgccccc cccggggacc cgccccaacc agaatacgac 1080
ttggagctga taacatcatg ttcctccaat gtgtcggtcg cccacgatgc atcaggcaaa 1140
agggtgtact acctcacccg tgatcccacc acccccctcg cacgggctgc gtgggagaca 1200
gctagacaca ctccagttaa ctcctggcta ggcaacatta ttatgtatgc gcccactttg 1260
tgggcaagga tgattctgat gactcacttc ttctccatcc ttctagcgca ggagcaactt 1320
gaaaaagccc tggactgcca gatctacggg gcctgttact ccattgagcc acttgaccta 1380
cctcagatca ttgaacgact ccatggcctt agcgcatttt cactccatag ttactctcca 1440
ggtgagatca atagggtggc ttcatgcctc aggaaacttg gggtaccacc cttgcgagtc 1500
tggagacatc gggccaggag cgtccgcgct aggctactgt cccaggggg gagggccgcc 1560
acttgtggca agtacctctt caactgggca gtgaagacca aactcaaact cactccaatc 1620
ccggctgcgt cccagctgga cttgtccggc tggttcgttg ctggttacag cgggggagac 1680
atatatcaca gcctgtctcg tgcccgaccc cgcggatccc atcaccatca ccatcactaa 1740
taa 1743

<210> 3
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificial
nucleic acid sequence for primer.

<400> 3
catatgtcaa tgtcctacac atggacagcc 30

<210> 4
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificial nucleic acid sequence for protein.

<400> 4
ttattagtga tggtgatggt gatgggatcc gcggggtcgg gcacgagaca ggctgtg 57

[Brief Description of the Drawings]

[Fig. 1]

The crystal structure of the HCV polymerase produced by using the program software RasMol is shown.

[Fig. 2]

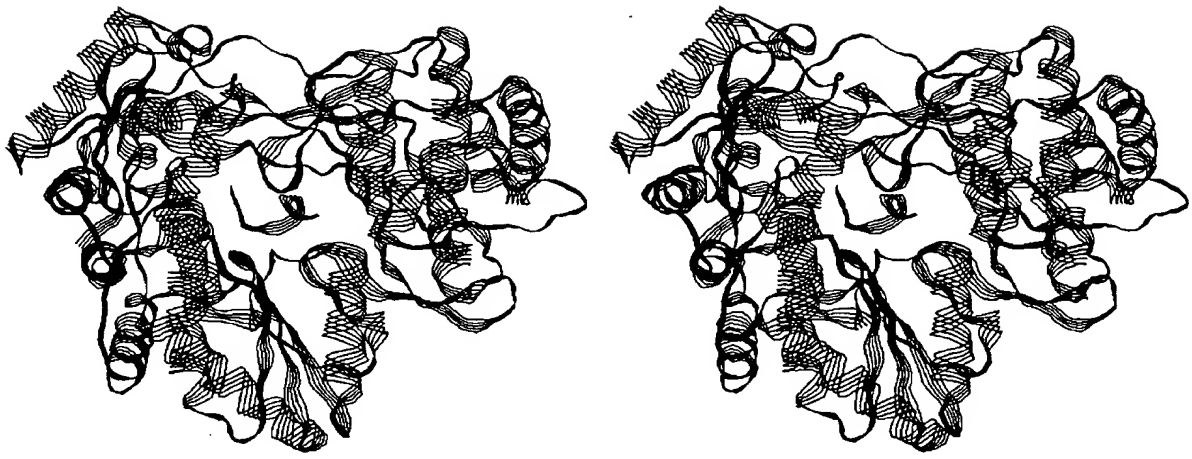
The crystal structure of the HCV polymerase is schematically shown.

[Fig. 3]

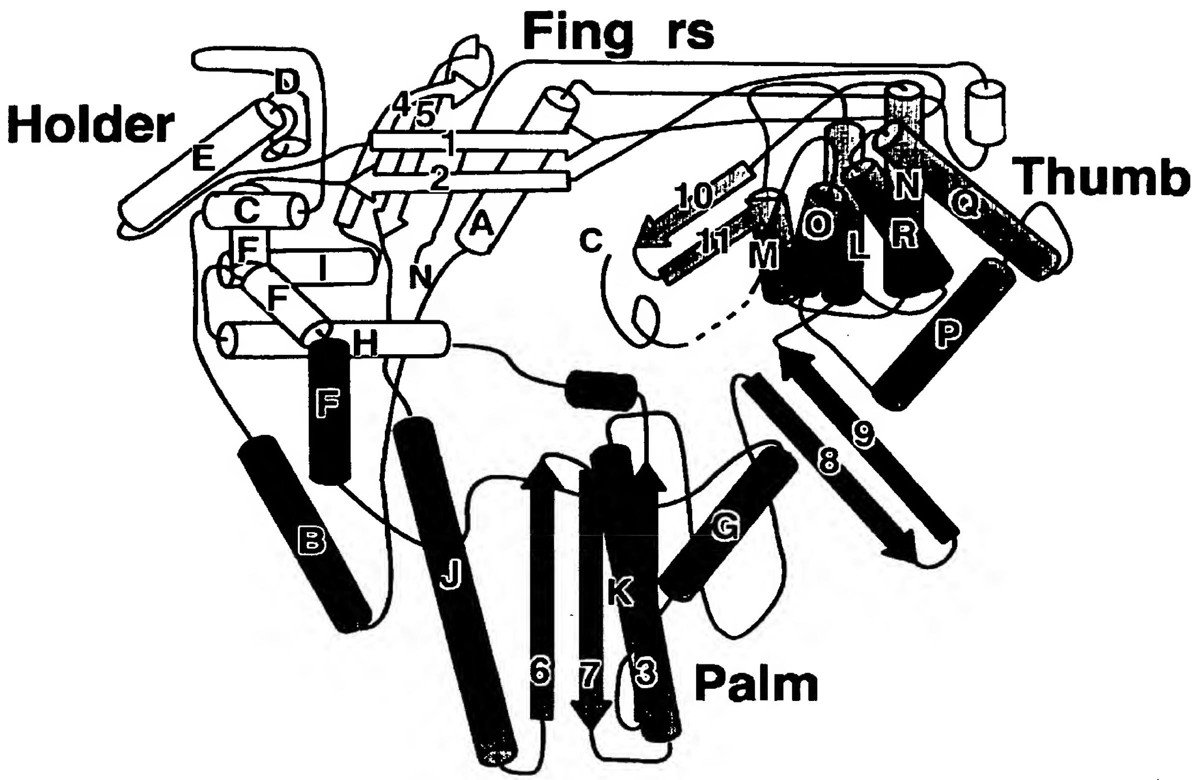
Comparison between amino acid sequences of HCV polymerase, poliovirus polymerase, and HIV reverse transcriptase are shown.

[Document Name] Drawings

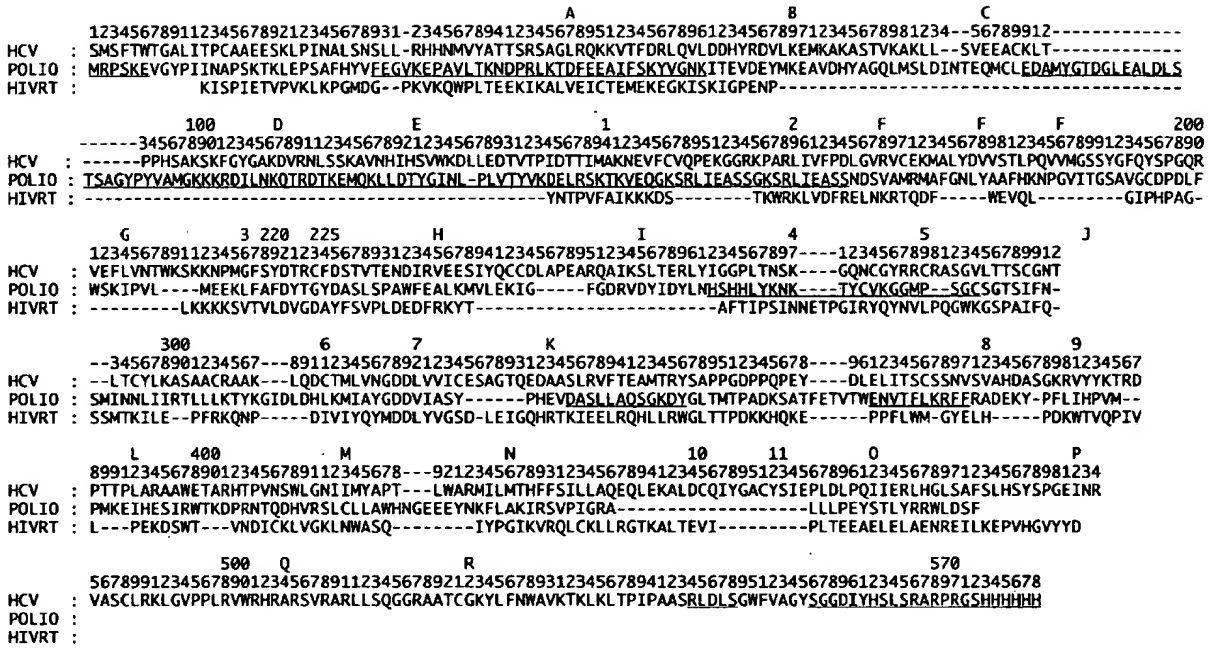
[Fig. 1]



[Fig. 2]


Fing rs
Holder
Thumb
Palm
D
E
C
F
I
F
H
F
B
J
K
G
A
N
C
4
5
1
2
10
11
M
O
L
R
N
Q
P
9
8
6
7
3

[Fig. 3]


A B C
HCV
POLIO
HIVRT
100 D E 1 2 F F F 200
G 3 220 225 H I 4 5 J
300 6 7 K 8 9
L 400 M N 10 11 O P
500 Q R 570

[Document Name] Abstract

[Abstract]

[Objective] The objective of the present invention is to provide recombinant HCV polymerases suitable for crystal analysis and a method for using the structural coordinate thereof.

[Constitution] Novel HCV polymerases whose crystal structure is stabilized and the gene thereof are disclosed. Furthermore, the structural coordinate of an HCV polymerase is determined, and an active site and an additional inhibitor-binding site are identified. Also provided are methods for designing and evaluating HCV polymerase inhibitors by using computers and the structural coordinate of HCV polymerase.